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More of the Structure and Perspective of Borobudur

Borobudur

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Chapter 1

ABODES OF SHIVA AND SHAKTI IN INDIA AND INDONESIA

FEATURING

THE MUNDESHWARI TEMPLE AND PRAMBHANAN

India has numerous temples dedicated to Lord Shiva, some bigger than others. But each with a unique story, revered by numerous people from across the world. While Kedarnath is one of the most popular Shiva temples in the country, there are others that hold equal importance for Hindus.

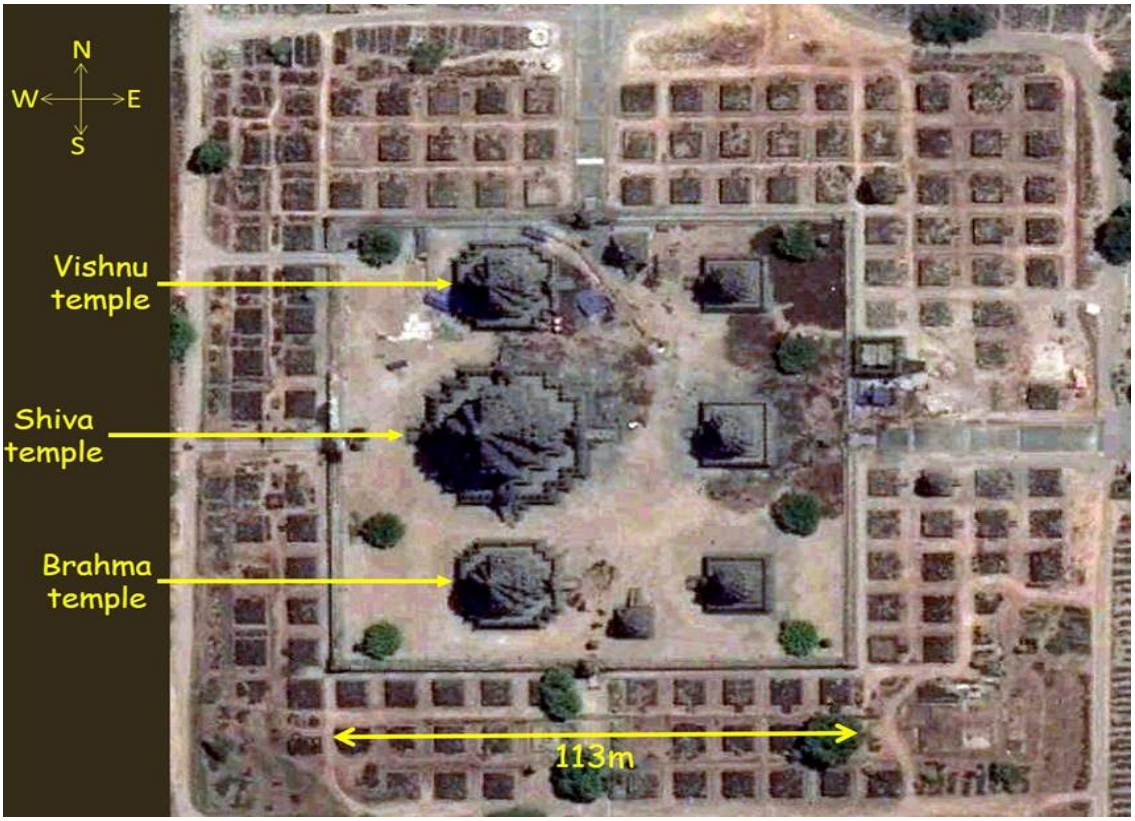
The Mundeshwari Temple in the state of Bihar is one such temple.

Similarly there are over 10,000 exceptionally maintained n Indonesia which too boasts of many temples from magnificent Hindu temple complexes with three hundred shrines showing intricate Balinese architecture to revered Buddhist monasteries in gorgeous forested island settings, Indonesia's temples attract pilgrims and tourists alike. Candi Prambanan is the largest Hindu temples complex uncovered so far in Indonesia; it is also known as Loro Jonggrang, and it includes 240 temples; the three central temples have intricate carvings on its walls to pictorially describe all major events from the Hindu epic Ramayana. Prambanan served as the royal temple of the Kingdom of Mataram, with most of the state's religious ceremonies and sacrifices being conducted there. The Prambanan Temple Is The Largest Hindu Temple Site In Indonesia With 240 Temples. A statue of the Hindu goddess Durga from the Shiva temple at Prambanan, Java, Indonesia, c. 750 - c. 950 CE. According to legend, the statue is a result of the transformation into stone of a local princess. by her cruel husband. The popular legend of Rara Jonggrang is what connects the site of the Ratu Boko Palace, the origin of the Durga statue in the northern cell/chamber of the main shrine, and the origin of the Sewu temple complex nearby. The legend tells the story about Prince Bandung Bondowoso, who fell in love with Princess Rara Jonggrang, the daughter of King Boko. But the princess rejected his proposal of marriage because Bandung Bondowoso had killed King Boko and ruled her kingdom. Bandung Bondowoso insisted on the union, and finally Rara Jonggrang was forced to agree to a union in

marriage, but she posed one impossible condition: Bandung must build her a thousand temples in only one night.

The Prince entered into meditation and conjured up a multitude of supernatural beings from the earth. Helped by these spirits, he succeeded in building 999 temples. When the prince was about to complete the condition, the princess woke her palace maids and ordered the women of the village to begin pounding rice and set a fire in the east of the temple, attempting to make the prince and the spirits believe that the sun was about to rise. As the cocks began to crow, fooled by the light and the sounds of daybreak, the supernatural helpers fled back into the ground. The prince was furious about the trick and in revenge he cursed Rara Jonggrang, turning her to stone. She became the last and the most beautiful of the thousand statues. According to the traditions, the unfinished thousandth temple created by the demons become the Sewu temple compounds nearby (*Sewu* means "thousands" in Javanese), and the Princess is the image of Durga in the north cell of the Shiva temple at Prambanan, which is still known as *Rara Jonggrang* or "Slender Maiden".

The temple is a UNESCO World Heritage site and is dedicated to the Trimurti – Shiva (the Transformer), Vishnu (the Preserver), and Brahma (the Creator). The highlight of the temple lies in the central compound, where eight major and eight minor temples are assembled on a raised platform, creating an architectural crescendo, the highest of which is Candi Shiva Mahadeva. ‘Candi’ means temple or shrine.


N
W
E
S
Vishnu temple
Shiva temple
Brahma temple
113m

1851- Murdeshwar above ancient litho and Prambanan below

The statue depicting Goddess Durga as Mahishasuramardini stands in the inner sanctum of the Shiva Temple located on the Prambanan Temple complex in Yogyakarta, Indonesia. The inner sanctum has four chambers, each of which faces a cardinal direction and houses a statue. The

History Of The Prambanan **Temple**

The building of Prambanan commenced in the middle of the 9th century, around 50 years after Borobudur, which is the largest Buddha temple in the world. While little is known about the early history of the temple, it is thought to have built by Rakai Pikatan to commemorate the return of the Hindu dynasty in Java.

However, in the mid-16th century, a great earthquake toppled many of the temples, and Prambanan remained in ruins for years. While efforts were made to clear the site in 1855, it was only in 1937 that reconstruction was first attempted. In 1953, the reconstruction of the main Shiva temple was completed and inaugurated by an Indonesian politician Sukarno.Prambanan again suffered extensive damage in the 2006 earthquake. Although the main temples survived, hundreds of stone blocks collapsed. Today, the main structures have been restored, but a lot of work remains to be done.

Architecture Of The Prambanan Temple

The temple follows the typical Hindu architectural traditions based on the Vastu Shastra and has incorporated the Mandal temple plan arrangements.

The whole complex contains 240 individual stone temples, many of which are scattered in ruins. The temple complex is divided into three zones. The outer zone is an open space, which serves as a yard for priests or worshippers, whereas the middle zone has 224 small shrines arranged into four concentric rows around the central compound. These shrines are called Candi Perwara, meaning ‘guardian temples’.

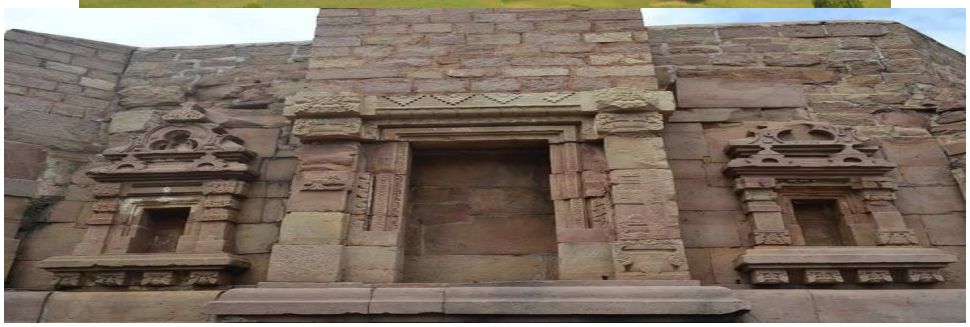
The Candi Shiva Mahadeva is centrally located and is one of the finest temples in the complex. Lavishly carved, the main spire of the temple soars as high as 47m high. The inner wall of the gallery encircling the temple contains vibrant scenes from the Ramayana.

The impressive Candi Vishnu touches 33m and sits north of Candi Shiva Mahadeva. It houses a four-armed image of Vishnu inside the inner sanctum. Candi Brahma is Candi Vishnu’s twin temple. Located south of Candi Shiva Mahadeva, it is again adorned with the final scenes of the Ramayana. In the inner chamber, a four-headed statue of Brahma is beautifully crowned.

The **Mundeshwari Devi Temple** (also spelled *Mundesvari*) is a Hindu temple, located at ramgarh village, 608 feet (185 m) on the Mundeshwari Hills of Kaimur plateau near Son River, in the Indian state of Bihar. It is an Archaeological Survey of India (ASI) protected monument since 1915. The ASI has recently dated the structure to 108 CE making it the oldest Hindu temple in the country. An information plaque at the site indicates the dating of the temple at least to 625 CE and Hindu inscriptions dated 635 CE were found in the temple.
It is an ancient temple dedicated to the worship of the goddess Durga and is considered one of the oldest functional Hindu temples in India. The findings also established that here was a religious and educational center spread over the hillock and Mandaleshwar (Shiva) temple was the main shrine. The Mandaleshwari (Durga) was on the southern side. The temple was damaged and the idol of Mandaleshwari (degenerated Mundeshwari and later connected with the mythical demon Mund) was kept in the eastern chamber of the main temple.

Timelines

- **636 - 38 CE** - Chinese visitor Huen Tsang writes about a shrine on a hill top flashing light, at about a distance of 200 lee south west to Patna-The location is only of Mundeshwari.
- **1790 CE** - Daniel brothers, Thomas and William visited Mundeshwari temple and provided its first portrait.
- **1888 CE** – Buchanan visited the region in 1813.
- **1891-92 CE** – First part of the broken Mundeshwari Inscription was discovered by Bloch during a survey by East India Company.
- **1903 CE** – Second part of the inscription was discovered while clearing the debris around the temple.
- **2003 CE** – Brahmi script royal seal of Sri Lankan king Dutthagamani (101-77 BCE) was discovered by Varanasi-based historian Jahnawi Shakhar Roy which changed the earlier findings about history of the place.
- **2008 CE** - The date of the inscription was established 30th year of Saka era (108 CE) by the scholars in a national seminar organized for the purpose by Bihar State Religious Trust Board at Patna.



The Landscape in Bihar surrounding the temple

Oldest functioning temple

Located in Kaimur district of Bihar, this is considered to be one of the oldest functioning temples in the world. The temple is dedicated to Lord Shiva, and Shakti. According to the Archaeological Survey of India, the temple dates back to 108 AD, while ancient Hindu inscriptions were found in the temple.

Architecture of the temple

The beautiful temple has a unique architectural style in the Nagara style. It assumes an octagonal plan, and has doors on all four sides. The temple is protected by the ASI, and local folklore points to its rich history, and mystical past.

Abode of Shiva and Shakti

It is said that the rituals in this temple have been performed non-stop throughout the years. The aboriginal tribe of Cheros worshipped Shakti, which is Mundeshwari, or Durga. She was made the main deity of the temple, but Mukhalingam, or Lord Shiva also occupied centrestage. The Chatur Mukhalingam, or the Lingam with four faces is worshipped here in this ancient temple.

Photo courtesy: tourism.bihar.gov.in

Festivals of the temple

The temple celebrates all festivals related to Shiva and Shakti, so while on one hand you have grand celebrations during Navratri, on the other hand, Shivratri is also an important day in the temple calendar. Other than that, Ramnavami is also a very important day here in the Mundeshwari Temple of Bihar.

The Prambhanan temple

The Prambhanan temple complex is linked to the Shivagrha inscription of 856 CE, issued by King Lokapala, which described a Shiva temple compound that resembles Prambanan. According to this inscription the Shiva temple was inaugurated on 12 November 856. According to this inscription, the temple was built to honor Lord Shiva, and its original name was *Shiva-grha* (the House of Shiva) or *Shiva-laya* (the Realm of Shiva). According to the Shivagrha inscription, a public water project to change the course of a river near Shivagrha temple was undertaken during the construction of the temple. The river, identified as the Opak River, now runs north to south on the western side of the Prambanan temple compound. Historians suggest that originally the river was curved further to east and was deemed too near to the main temple. Experts suggest that the shift of the river was meant to secure the temple complex from the overflowing of lahar volcanic materials from Merapi volcano. The project was done by cutting the river along a north to south axis along the outer wall of the Shivagrha Temple compound. The former river course was filled in and made level to create a wider space for the temple expansion, the space for rows of *pervara* (complementary) temples.

The statue of Shiva Mahadeva inside the garbagriha of the main temple.
Some archaeologists propose that the statue of Shiva in the garbhagriha (central chamber) of the main temple was modelled after King Balitung, serving as a depiction of his deified self after death. The temple compound was expanded by successive Mataram kings, such as Daksa and Tulodong, with the addition of hundreds of *perwara* temples around the chief temple.
With main *prasada* tower soaring up to 47 metres high, a vast walled temple complex consists of 240 structures, Shivagrha Trimurti temple was the tallest and the grandest of its time. Indeed, the temple complex is the largest Hindu temple in ancient Java, with no other Javanese temples ever surpassed its scale. Prambanan served as the royal temple of the Kingdom of Mataram, with most of the state's religious ceremonies and sacrifices being conducted there. At the height of the kingdom, scholars estimate that hundreds of brahmins with their disciples lived within the outer wall of the temple compound. The urban center and the court of Mataram were located nearby, somewhere in the Prambanan Plain.

Mundeshwari Tantric Temple

The worship of Devi Durga in the form of Devi Mundeshwari in the temple is also indicative of tantric cult of worship, which is practiced in Eastern India. Rituals and worship have been performed here without a break, hence Mundeshwari is considered one of the most ancient Hindu temples in India. The temple is visited by a large number of pilgrims each year, particularly during the Ramnavami, Shivratri festivals. A big annual fair (*mela*) is held nearby during the Navaratra visited by thousands.

The temple, built of stone, is on an octagonal plan, which is rare. It is the earliest specimen of the Nagara style of temple architecture in Bihar. There are doors or windows on four sides and small niches for the reception of statues in the remaining four walls. The temple *shikhara* or tower has been destroyed. However, a roof has been built, as part of renovation work. The interior walls have niches and bold mouldings which are carved with vase and foliage designs. At the entrance to the temple, the door jambs are seen with carved images of Dvarapalas, Ganga, Yamuna and many other murtis. The main deities in the sanctum sanctorum of the temple are of the Devi Mundeshwari and *Chaturmukh* (four-faced) Shiva linga. There are also two stone vessels of unusual design. Even though the Shiva linga is installed in the centre of the sanctum, the main presiding deity is Devi Mundeshwari deified inside a niche, which is seen with ten hands holding symbols riding a buffalo, attributed to Mahishasuramardini. The temple also has murtis of other popular gods such as Ganesha, Surya and Vishnu. A substantial part of this stone structure has been damaged, and many stone fragments are seen strewn around the temple. However, under the jurisdiction of ASI, it has been the subject of archaeological study for quite some time.

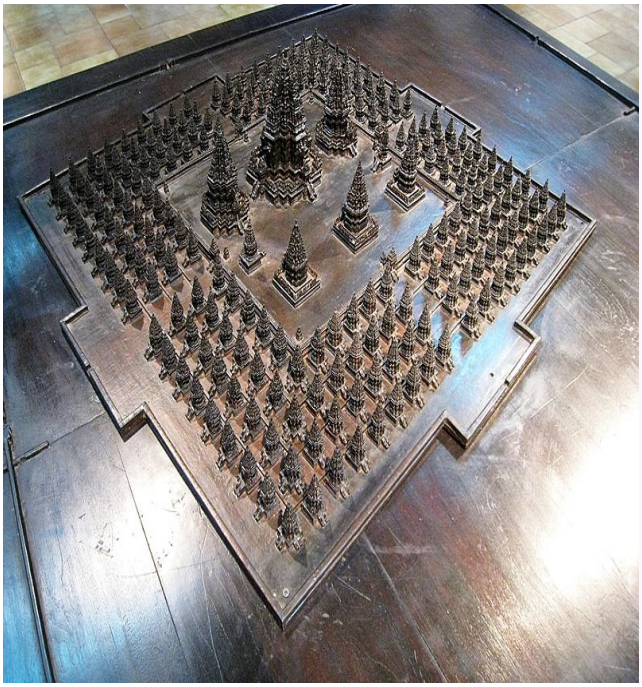
The Archaeological Survey of India has restored the temple under instruction from the Union Ministry of Culture. Restorative works included the removal of soot from the temple interior via a chemical treatment, repair of damage to religious murti (idol) and cataloging and documentation of scattered fragments for later reuse. Other works included installation of solar powered lighting, displays for antiquities and provision of public amenities. The Government of Bihar has allocated Rs 2 crore to improve access to the temple.
It can be reached by road via Patna, Gaya, or Varanasi. The nearest railway station is at Mohania - Bhabua Road railway station from where the temple is 22 km by road.
Lal Bahadur Shastri International Airport, Varanasi is the nearest airport, located at a distance of 102 km from the Temple. Indian carriers including Air India, Spicejet, and international carriers like Air India, Thai Airways International, Korean Air and Naaz Airlines operate from here. Daily flights to Delhi, Mumbai and Kolkata are available from here.

Single verses many

The Murdeshwari is a single temple but the Prambanan had originally there were a total of **240** temples standing in Prambanan. The Prambanan Temple Compound consist of:

- **3 Trimurti temples**: three main temples dedicated to Vishnu, Shiva and Brahma
- **3 Vahana temples**: three temples in front of Trimurti temples dedicated to the vahana of each gods; Garuda, Nandi and Hamsa
- **2 Apit temples**: two temples located between the rows of Trimurti and Vahana temples on north and south side
- **4 Kelir temples**: four small shrines located on 4 cardinal directions right beyond the 4 main gates of inner zone
- **4 Patok temples**: four small shrines located on 4 corners of inner zone
- **224 Pervara temples**: hundreds of temples arranged in 4 concentric square rows; numbers of temples from inner row to outer row are: 44, 52, 60, and 68

The Prambanan compound also known as Rara Jonggrang complex, named after the popular legend of Rara Jonggrang. There were once 240 temples standing in this Shivaite temple complex, either big or small. Today, all of 8 main temples and 8 small shrines in the inner zone are reconstructed, but only 3 out of the original 224 pervara temples are renovated. The majority of them have deteriorated; what is left are only scattered stones. The Prambanan temple complex consists of three zones; first the outer zone, second the middle zone that contains hundreds of small temples, and third the holiest inner zone that contains eight main temples and eight small shrines.



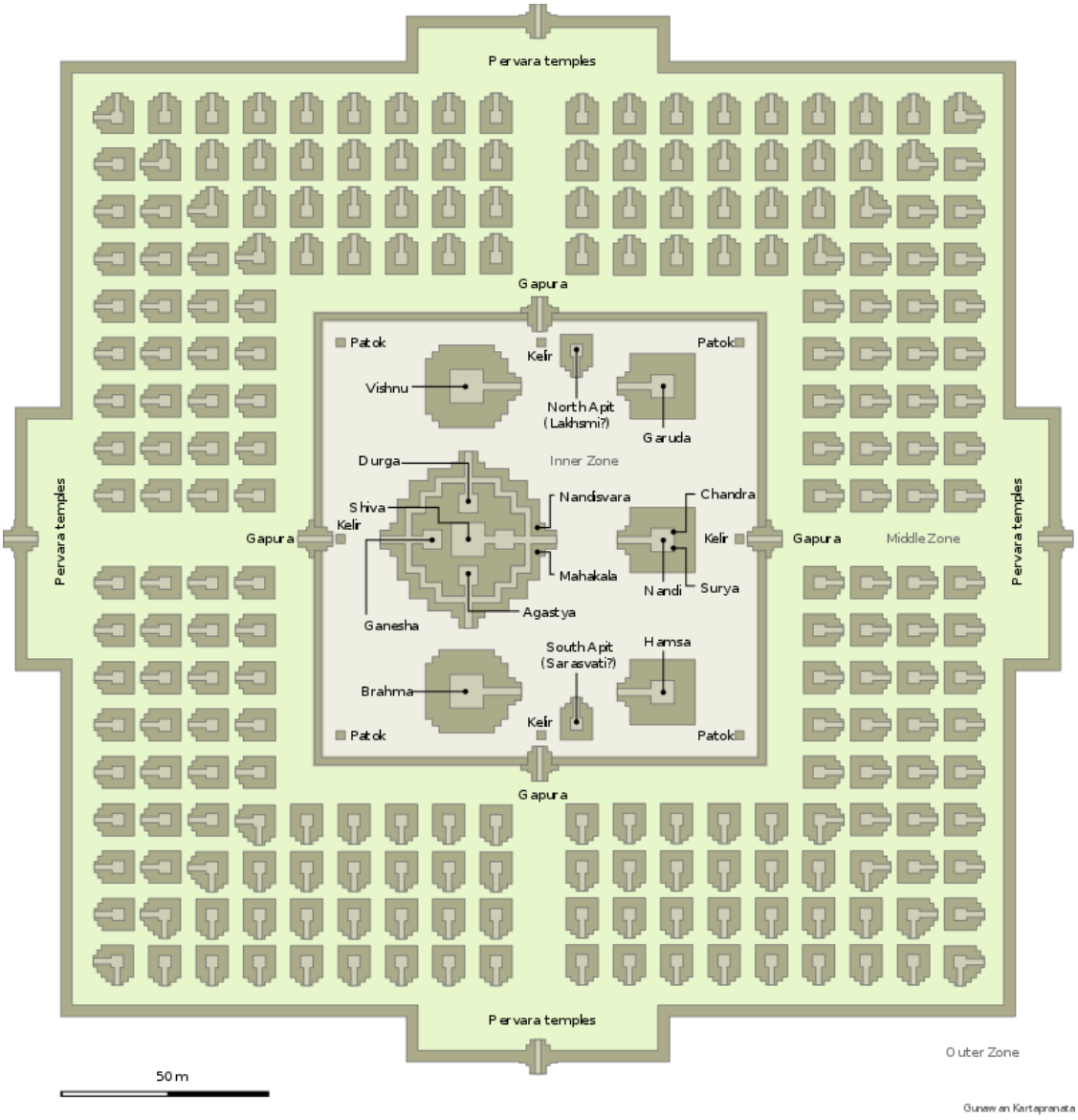

An architectural model of the Prambanan temple complex; originally there were 240 temples in this temple compound

The Hindu temple complex at Prambanan is based on a square plan that contains a total of three zone yards, each of which is surrounded by four walls pierced by four large gates. The outer zone is a large space marked by a rectangular wall. The outermost walled perimeter, which originally measured about 390 metres per side, was oriented in the northeast–southwest direction. However, except for its southern gate, not much else of this enclosure has survived down to the present. The original function is unknown; possibilities are that it was a sacred park, or priests' boarding school (ashram). The supporting buildings for the temple complex were made from organic material; as a consequence no remains occur.

From left Agastha Muni,Shiva and Brahma in Prambhanan

Nandi side view

DURGA or the slim maiden LOLO Jaggron



Abduction of Sita by Ravana- episode from RAMAYANA carved on the walls of Prambhanan(RIGHT)

Interesting facts about Prambanan

1. Prambanan is the largest and most beautiful Hindu temple complex in Indonesia. Prambanan is a collection of massive Hindu temples (candi) built by the Mataram Kingdom, rulers of central Java and defeaters of the Sailendra Dynasty.
2. It is the masterpiece of Hindu culture of the ninth century.
3. A temple was first built at the site around 850 CE by Rakai Pikatan and expanded extensively by King Lokapala and Balitung Maha Sambu the Sanjaya king of the Mataram Kingdom.
4. It is dedicated to the Trimurti (Trinity of the formless supreme God), the expression of God as the Creator (Brahma), the Preserver (Vishnu) and the Destroyer (Shiva).
5. The complex is laid out in the form of a mandala, and features the towering, broad spires that are typical of Hindu temple architecture, and represent Meru, the holy mountain where the gods live.

6. **Originally there were 240 temples in the complex** but many of them have deteriorated or been looted leaving just scattered stones.The Prambanan temple complex consists of **three zones**; first the outer zone, second the middle zone that contains hundreds of small temples, and third the holiest inner zone that contains eight main temples and likewise, eight small shrines.
7. The three main inner shrines are dedicated to Brahma the Creator, Vishnu the Keeper and Shiva the Destroyer. **Th**e three towers cut a striking figure in any conditions, but are perhaps most breathtaking when lit up at night.

8. **The middle zone consists of four rows of 224 identical, concentrically arranged shrines**. Most of these are in ruins but a few have been fully restored. These shrines are called **Candi Perwara** (guardian temples).

9. The **Shiva temple though** dedicated to Shiva the Destroyer contains the large statute of DURGA as Maishasuramardini or kikller of the demon Mhaishasur and is the tallest and largest structure in Prambanan complex, it measures 47 meters (154 feet) tall and 34 meters (111 feet) wide. Relief sculptures around the perimeter tell the story of the Ramayana.
10. The Shiva temple contains **five chambers**, four small chambers in every cardinal direction and one bigger **main chamber** in central part of the temple. The largest chamber contains a three meter (10 feet) high **statue of Shiva Mahadeva**.
11. North of Shiva Temple is **Vishnu Temple**, dedicated to Vishnu the Preserver.It measures 20 meters (65 feet) wide and 33 meters (108 feet) tall. Relief sculptures around its perimeter tell the story of Lord Krishna, an avatar of Vishnu.
12. South of Shiva Temple is **Brahma Temple**, dedicated to Brahma the Creator. It also measures 20 meters (65 feet) wide and 33 meters (108 feet) tall. Relief sculptures around the perimeter tell the story of the Ramayana.

13. The **narrative bas-relief panels** was carved along the inner balustrades wall on the gallery around the three main temples.

14. **The other three shrine in front of three main temples is dedicated to vehicle (vahana) of the respective gods – the bull Nandi for Shiva, the sacred swan Hamsa for Brahma, and Vishnu's Kite Garuda.**

15. 

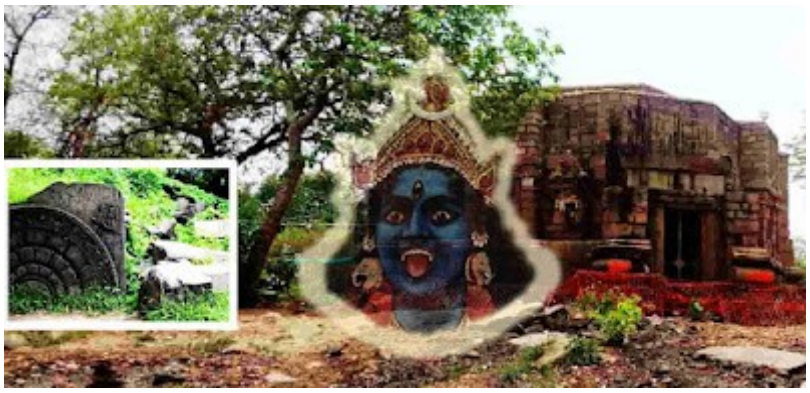
16. Between these row of main temple, on north and south side stands **two Candi Apit temples**. Apit in Javanese means “flank”, it refer to the two temples position that flanked the inner courtyard in north and south sides.
17. The **outer zone** is a large open space that was once bounded by a large wall (long gone). The function of this space is disputed but was probably either a park/relaxation garden or the site of an ashram for temple priests brahmins.
18. The **other name** of this temple is the **Lorojonggrang temple**.
19. A **major earthquake in the 16th century** caused serious damage to the already crumbling and largely forgotten temples.
20. The British rediscovered Prambanan, along with Borobudur, in the early 19th century.
21. Half-hearted excavations by archaeologists in the 1880s facilitated looting. In 1918, the Dutch began **reconstruction** of the compound and proper restoration only in 1930. Efforts at **restoration** continue to this day. The reconstruction of the main Shiva temple was completed around 1953 and inaugurated by Sukarno (the first President of Indonesia).

22. Prambanan was selected as a UNESCO World Heritage Site in 1991**.**

Mundeshwari Temple is a Tantric Temple but the Prambanan is NOT

Tantrik Pursuits

Hindu Temples are not just some arrangements of inanimate stones. Along with Hindu Mythology (Puran) a temple carries millions of years of history that took place at the base of the evolutionary Earth. Civilization develops over time and lost again. But that vanishing stories of human civilizations still breath in the grooves of the lifeless stones of an ancient temple. Yes, even a temple has life.



Mundeshwari Temple – Temple Science Represents Some Astonishing Facts

Mundeswari Temple is such an ancient temple, which is associated with the story of the creation. The Mundeshwari Devi Temple is situated on the Mundeshwari Hills (at an elevation of 608 feet), near Son river, in Kaimur District, Bihar, India. Bihar has been a reign with rich culture since ancient times. Even in Ramayana and Mahabharat, It has been shown to be a cultural state. Mundeswari Temple is an ancient temple dedicated to Shiva-Shakti and is considered to be one of India's oldest functional Hindu temples, built entirely of stone and octagonal on plan.
Hindu inscriptions dated 635 CE were found in the temple.

Origin Of The Temple & Markendeya Puran
This temple is also related to the Markandeya Purana. According to Markendya Purana this is the place where Maa Shakti killed Mund. Chand and Mund were the commanders of Ashura Kings Shumbh-Nishumbh.

It is said that Devi came here to kill the demons named Chanda and Munda, after the destruction of Chand, during the war, Mund had hidden in this hilly area. According to Puran, it was the place where Mother killed demon Munda. Hence this place is famous by the name of Mother Mundeshwari Devi.

Astonishing Facts
In this temple of Mother Mundeshwari, devotees experience the miracle of the ancient Shivling, and glimpse of the amazing power of Mother is also seen here. Devotees believe that Mother Mundeshwari fulfills every wish sought here with a sincere heart.

The sacrificial method in this temple is slightly distinct.The greatest characteristic of the Mundeshwari temple is that it has a sattvic tradition of animal sacrifice. Here animals are offered in sacrifice, but their lives are not taken. When a animal is brought before the mother, the priest touches the idol and throws some holy rice on the animal. The animal becomes unconscious at that moment. But the animal stands up again after the priest completes the process of Puja. After all the rituals are completed, the animal is released and according to the rules of the temple, no one can ever hurt the animal. Not only that but the animal is being treated as divine soul by the local people. When this miracle happens in front of your eyes, you cannot believe that you are in the 21st century. It is incredible that such a Divine events still occur in today’s India, to which no reasonable explanation has been given till now.

Chaturmukh (Four Faced) Shiva Linga changes Its Colour

The Devi Mundeshwari and Chaturmukh (four faced) Shiva lingam are the primary deities in the temple. It is said that its colour of ancient Shiva lingam appears differently in the morning, afternoon and evening.

Temple Science

The temple, constructed of stone, stands on a rare octagonal plane. It is the first example of the temple architecture of Nagara in Bihar. It is considered to be the earliest specimen of the Nagara style of temple architecture. The Vimana or shikhara of the temple has been demolished. But as part of the renovation project, a roof has been constructed.

There are small window typed doors on the four walls of the temple and besides the images of Shiva Durga, some other divine images are also carved. The interior walls have niches and bold mouldings which are carved with vase and foliage designs.

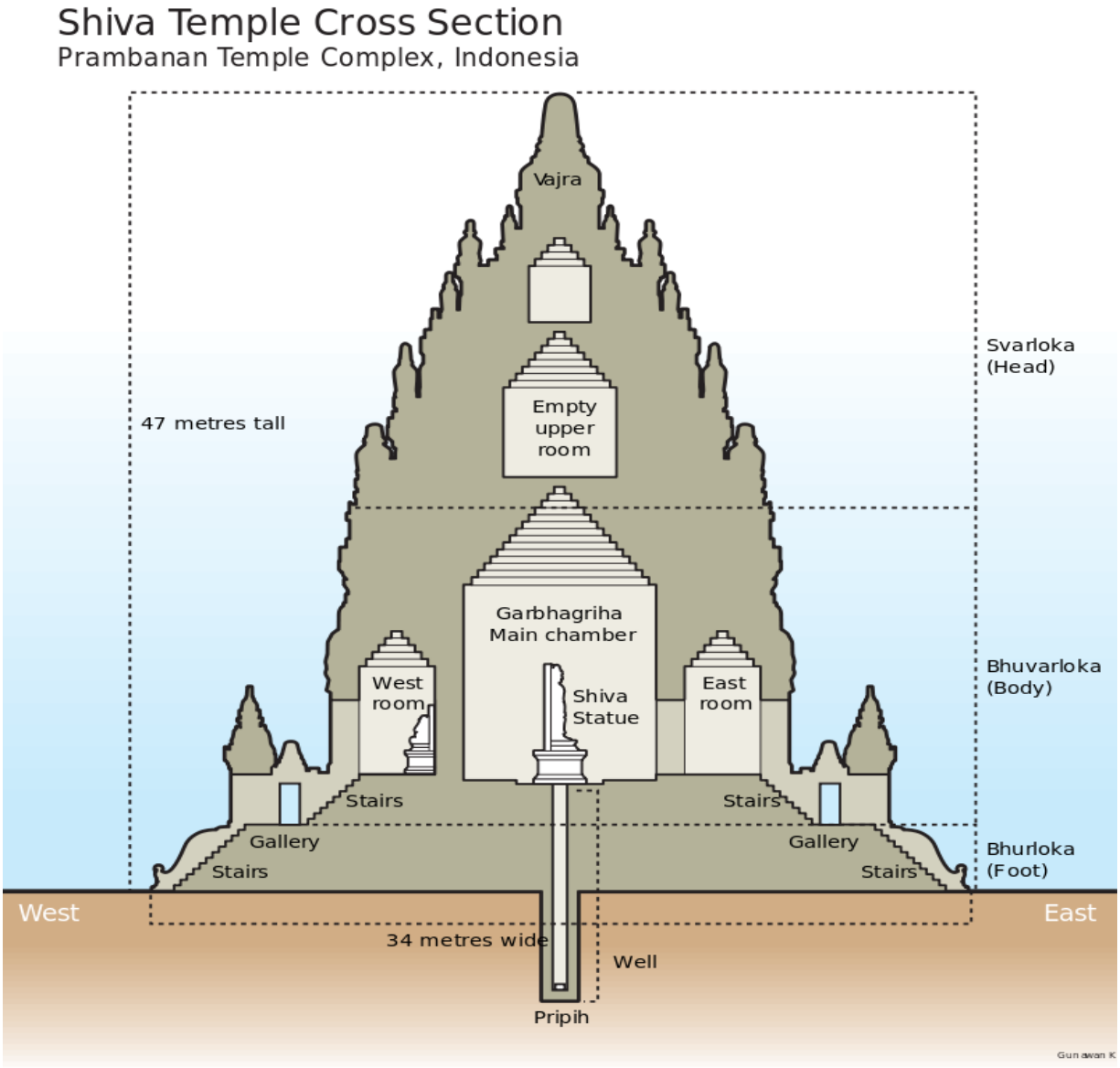
The door jambs with sculpted carvings of Dvarapalas, Ganga, Yamuna and several other murtis are also seen at the temple entrance. Murtis of other famous gods like Ganesha, Surya and Vishnu can be seen. A significant portion of this stone structure has been destroyed and there are many fragments of stone stretched across the temple.

The Devi Mundeshwari and Chaturmukh (four faced) Shiva linga are the primary deities in the temple. Since 1915, the temple has been a protected monument under ASI.

Siddha Yantras and Tantra Sadhana

The Mundeshwari Hill has many archaeological relics. Looking at the stones and pillars scattered on the hill, it seems that many mysterious Siddha Yantras and mantras are engraved on them. Yet in some special dark nights tantra is practiced here. Who can tell how many unknown

secrets and mystic pursuits are still hidden in the temple premises ? Please let us know your thoughts in the comments section. Thanks for reading, here is Temple Science at your service , don't forget to subscribe. Soon will come to you with a new fascinating and interesting article on mysterious Hindu Temple Science.



Mundeshwari temple: a living tradition

The large sacrificial goat is pulled up the stairs by its ear. It comes bleating. A stop is made in front of the makeshift office where the owner's name is

entered. Then the goat is alternatively pushed and pulled inside the temple. A parikrama or round is made inside and the goat is lifted up protesting upto the feet of the deity. The priest pushes down the goat and holds it down and then releases his hand. Surprisingly the goat remains still, as if it can feel the presence of the Mother. The priest waits for some time, then sprinkles holy water and flowers taken from the deity's feet. The goat jumps up as if it has been released from a spell. The sacrifice has been done. It is now led back to the village where it spends the rest of its life undisturbed, as it is one of the Mother's chosen ones. Where else in the world do you get a bloodless sacrifice or **Satvik Bali**?

Welcome to Mundeshwari temple where the nearest railhead is Bhabua Road railway station, 25 km away, on the connection between Delhi and Kolkata. The Grand Trunk Road also passes by Bhabua Road. A tarmac road goes from Bhabua to the top of the Mundeshwari hill, from which a flight of stairs go up to the temple.

This temple was built in the Nagara style,which is comparatively rare in Bihar. The temple is octagonal in shape (ashtasra) with four doorways, at the four cardinal points, one of which is blocked, and niches in the other four. Octagonal temples are unusual in India. The main entrance now is to the south. The door frames are beautifully decorated. At one time there was a portico. Remains of pillars still indicate the collapsed portico. The roof had collapsed at some point. When the English had first started exploring Eastern India, this temple was already dilapidated.

In the modern era, the earliest record is the painting by Thomas Daniell and William Daniell in 1790. Plate 13 from their fifth set of " Oriental Scenery" called " Antiquities of India". The condition of the roof can be clearly seen in his painting.
The next record is by Francis Buchanan, who did not actually visit the place but sent a painter who drew it. In his " The History, Antiquities, Topography, and Statistics of Eastern India" (Volume 1) he gives a detailed description of the site and also mentions that it was in a ruinous state.
That this temple at all survived is because of the Archaeological Department of India, especially Mr T. Bloch of the Bengal Circle, who worked tirelessly to prevent total collapse of the temple. The present flat roof has however been constructed by the PWD.


Vermillion unfortunately covers the carvingsThe main entrance Beautifully decorated Dwarpalika.Dwarpalikas ravaged by time.Well moustached lions, quite quirky. One wonders whether they had ever seen a

real lion? Yaksha


Nandi at Prambanan LEFT and Murdeshwari RIGHT

Inside the temple there are two main deities. Just after the entrance, in the centre of the sanctum, is a Chaturmukha Shiva Lingam, that is a Shiva Lingam having four faces. The antiquity of this is also attested by the fact that the prepuce was still eked out here. There are three side compartments after the Shiva Lingam, one of them being empty. In the second, the north cell of the temple, is the sculpture of Ganesha. The main deity is that of Ma

Mundeshwari on the eastern niche of the sanctum. She has golden eyes and is covered with richly decorated clothes and jewellery so that only her face is visible. It is strictly prohibited to take photos of the deity, so photos can only be taken from the door. The eight armed deity here, unlike the present day image of Mahishasuramardini, is riding on a buffalo.

There are theories that Ma Mundesvari deity was actually situated on a separate temple on the hillside and subsequently been transferred here and the main deity of the current temple in ancient times was Shiva. There are also theories that though the temple has been constructed in the later Gupta period, this was locally constructed and Ma Mundesvari was a local deity who has been adopted into the Devi pantheon. All these theories are immaterial to those who come to visit the Mother and seek her blessings and offer sacrifices.

Murdeshwara pics

Carvings-Murdeshwar

The statue of Shiva's son Ganesha is housed in the inner sanctum of the Shiva Temple located on the Prambanan Temple complex in Yogyakarta, Indonesia.TO RIGHT Murdeshwar temple Ganesh idol

Maha Shivaratri special: Discovering Uttarakhand’s famous Shiva temples

Lord Shiva, also known as *Bhole Nath* by his devotees is the divine energy, the protector and the destroyer. In India, there are numerous temples devoted to Shiva but the ones in Uttarakhand are most revered and most visited. On the occasion of Maha Shivaratri, we’ll tell you about the most popular Shiva temples nestled in God's own Uttarakhand.

Kedarnath Temple, Rudraprayag

Kedarnath Temple, nestled in the Garhwal Himalayan ranges, needs no introduction. Set on the banks of the Mandakini river, the temple holds a huge religious significance. Mythology has it that after the war of *Mahabharata*, the Pandavas carried a pilgrimage to the Himalayas for penance. There they saw a guiding light and moved towards Guptkashi (Rudraprayag). A *Jyotirlinga* or a divine light was flickering and Shiva immersed from it. Lord Shiva blessed the five brothers and told them that He will remain there in the form of a triangular-shaped *Jyotirlinga*.

Tungnath Temple, Rudraprayag

Tungnath or the *Lord of the Peaks* is the highest Shiva temple in the world. Legend has it that Shiva took the form of a bull and hid at Guptkashi to avoid the Pandavas. But they managed to find him and tried to catch Shiva in his bull form. Later, Shiva’s *bahu* or arms were seen at Tungnath.

Credit:
iStock

Tapkeshwar Mahadev, Dehradun

Nestled in the lap of Doon Valley, Tapkeshwar Mahadev is a beautiful cave temple. A *shivalinga* is enshrined inside a dark cave here. Mythology has it that when Guru Dronacharya's wife Kalyani gave birth to Ashwatthama, she was not able to breastfeed him and couldn't buy a cow for feeding. The baby Ashwatthama prayed to Shiva for milk and his wish was granted. The baby would get milk from the *Shivalinga* inside the Drona Cave where Guru Dronacharya lived. Till date, the water mysteriously drips from the ceiling on the *Shivalinga* which is a sight to marvel.

Rudranath Temple, Chamoli

Nestled in the Chamoli district of Uttarakhand, Rudranath Temple is of utmost importance. Here Lord Shiva appeared in the form of a hump after being chased by the Pandavas. Lord Shiva's palanquin is brought to Gopeshwar here every year for worshipping. The *doli* passes through several destinations before reaching Rudranath.

Neelkanth Mahadev, Rishikesh

It is believed that Neelkanth Mahadev is the place where Shiva drank *Halahala* or the poison that originated during the *samudra manthan* (the gods and the demons churned the ocean to obtain the elixir). Lord Shiva's throat picked shades of blue after drinking the poison.

Madhyamaheshwar Temple, Rudraprayag

Another popular temple is the Madhyamaheshwar Temple in the beautiful Mansoona village. Legend has it that Lord Shiva was angry with the Pandavas and in order to avoid them, he disguised himself as a bull or *Nandi*. Still, the five brothers managed to recognise him and tried to hold the bull by its tail. The bull soon disappeared and appeared at five places in the form of a hump at Kedarnath, as *bahu* (arms) at Tungnath, as his face at Rudranath, in navel shape and stomach at Madhyamaheshwar, in the form of *jata* or hair locks at Kalpeshwar. The Pandavas were blessed with Shiva's five different forms and attained salvation.

Kalpeshwar Mahadev, Chamoli

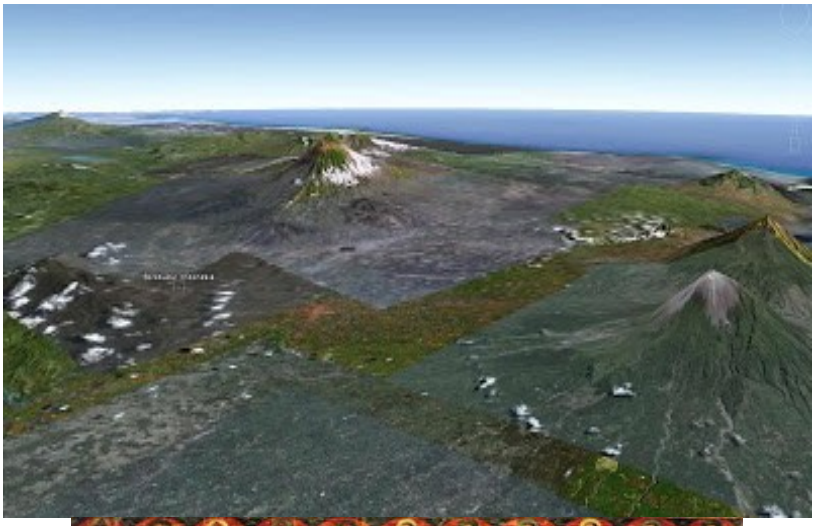
This grand temple of Shiva is set in the picturesque Urgam Valley in the Kalpeshwar village in Uttarakhand. This is the place where locks or *jata* of Shiva appeared. The temple is visited by lakhs of devotees every year.

Credit:
iStock

Jageshwar Dham, Almora

Another popular Shiva temple is Jageshwar Dham. The temple is situated 35 km from Almora and is among the twelve Jyotirlingas of Lord Shiva in the country. The complex features 125 temples along with some marvellous stone statues.

Chapter 2
Borobudur as Buddhist Mandala ?



Mandala in Borobudur

The Buddha says:—*“*
They who speak much are blamed. They who speak a little are blamed. They who are silent are also blamed. In this world there is none who is not blamed.”

Note: In 2020 we uploaded an article titled”Borobudur Temple as a Mandala”This is additional material to supplement those ideas

Borobodur as the Ultimate Buddhist Temple

Borobudur, was built during over a half century by the Sailendra Dynasty after Mahayana Buddhism was introduced from the Srivijaya Kingdom of South Sumatra in the early half of the 8th century AD. Many Buddhism images and reliefs in Borobudur were made referencing Gandavyuha and Vajrayana/Esoteric Buddhism from Sri Lanka and East India. Unlike Angkor it is not Converted but originally Buddhist.

The stepped pyramid shape without an inner space as found at Borobudur is found in neither India nor Sri Lanka. And there are no stupas with that similar shape in Southeast Asia prior to Borobudur. Similar shaped monuments are found only in South Sumatra etc. This type of monument, originating from the mountain religions of Megalithic culture that predated the introduction of Buddhism continued through the Historical Age. Borobudur can be seen as a massive monument of this origin, decorated in Buddhism style.

Borobudur in Java

Borobudur is a step pyramid, built around a natural hill, comprised of a broad platforms topped by five walled rectangular terraces, and they in turn are topped by three round terraces. Each terraces is outlined with ornaments and statues and the walls are decorated with bas reliefs. More than two million blocks of volcanic stone were carved during its construction. Pilgrims have traditionally walked around the monument in a clockwise manner moving up each of the five levels, and in process covering five kilometers.

Unlike most temples, Borobudur did not have actual spaces for worship. Instead it has an extensive system of corridors and stairways, which are thought to have been a place for Buddhist ceremonies. Borobodur also has six square courtyards, three circular ones, and a main courtyard within a stupa at the temple's peak. The entire structure is formed in the shape of a giant twirling staircase, a style of architecture from prehistoric Indonesia.

Borobudur is a three' dimensional model of the Mahayana Buddhist universe. The climb to the top of the temple is intended to illustrate the path an individual must take to reach enlightenment. At the main entrance on the east side, visitors can not even see the top. Scholars believed this was intensional. At the top was the ideal of Buddhist perfection, the World of Formlessness. The architecture and stonework of this temple has no equal. And it was built without using any kind of cement or mortar!

Borobudur resembles a giant stupa, but seen from above it forms a mandala. The great stupa at the top of the temple sits 40 meters above the ground. This main dome is surrounded by 72 Buddha statues seated inside perforated stupa. Five closed square galleries, three open circular inner terraces, and a concentric scheme express the universe geometrically. At the center of the top of the temple is a beautifully shaped stupa which is surrounded by three circles of smaller stupas that have the same shape. There are 72 of these, each with a Buddha statue inside. Touching them is supposed to bring good luck. Unfortunately many had their heads lopped off by 19th century explorers looking for souvenirs. The 72 small latticed stupas look like perforated stone bells. The temple is decorated with stone carvings in bas-relief representing images from the life of Buddha— the largest and most complete ensemble of Buddhist reliefs in the world.

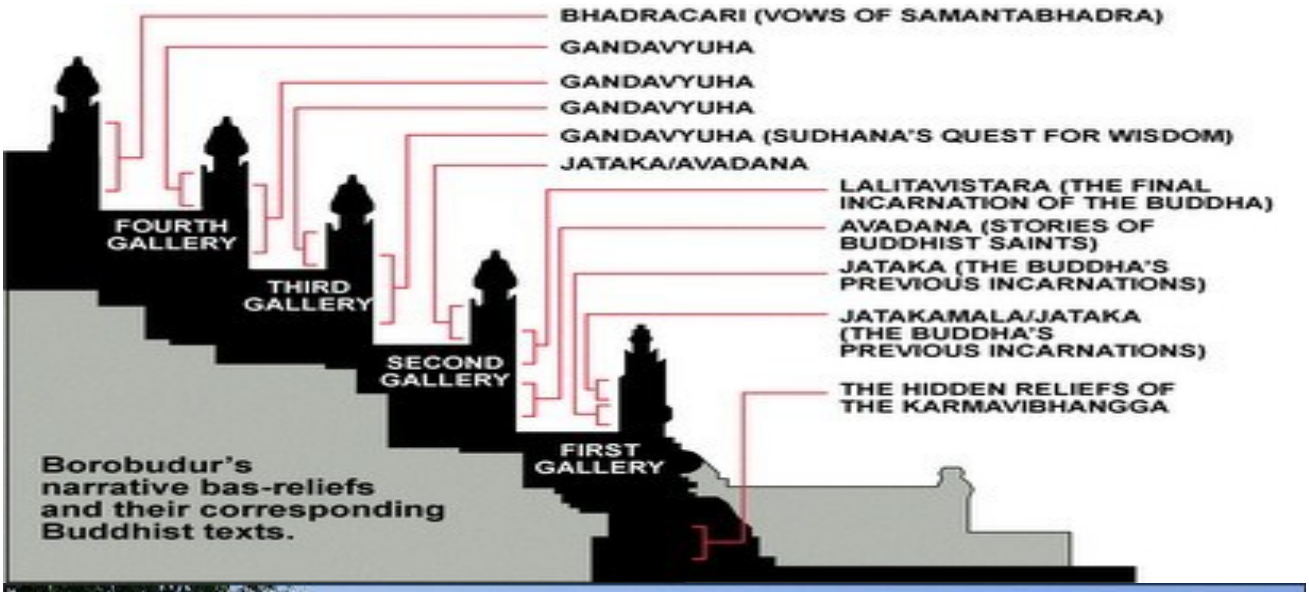
Borobudur is both a shrine to the Lord Buddha and a place for Buddhist pilgrimage. The ten levels of the temple symbolize the three divisions of the religion's cosmic system. As visitors begin their journey at the base of the temple, they make their way to the top of the monument through the three levels of Budhist cosmology, Kamadhatu (the world of desire), Rupadhatu (the world of forms) and Arupadhatu (the world of formlessness). As visitors walk to the top the monument guides the pilgrims past 1,460 narrative relief panels on the wall and the balustrades.

Indian connect in History of Borobudur

Borobudur was built by the Sailendra Dynasty kings in the 8th and 9th centuries, around that time that Charlemagne ruled Europe. When it was completed an epic poet from Ceylon wrote: "Thus are the Buddha incomprehensible, and incomprehensible is the nature of the Buddhas, and incomprehensible is the reward of those who have faith in the incomprehensible." According to UNESCO: Founded by a king of the Saliendra dynasty, Borobudur was built to honour the glory of both the Buddha and its founder, a true king Bodhisattva. This colossal temple was built between AD 750 and 842: 300 years before Cambodia's Angkor Wat, 400 years before work had begun on the great European cathedrals. Little is known about its early history except that a huge army of workers worked in the tropical heat to shift and carve the 60,000 square meters of stone.

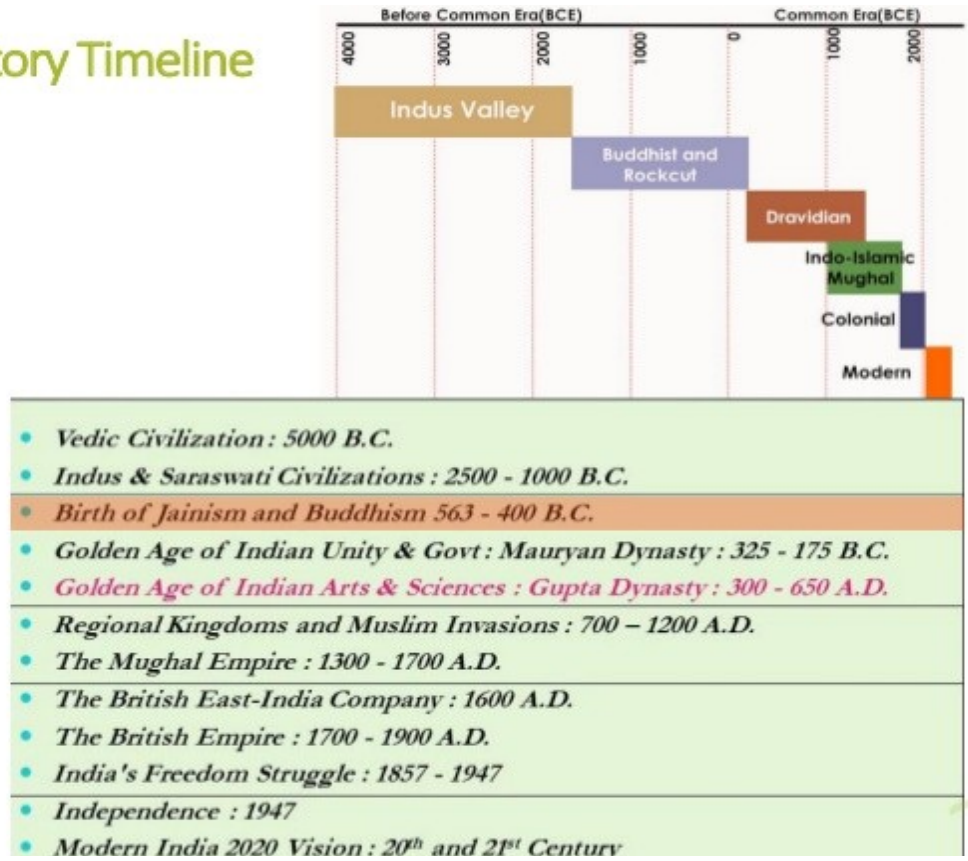
Why it was built remains a mystery. There are no written records on the subject. No ancient cities have been found nearby. There is no clear sanctuary as a place of worship and no room to store icons. Many historians and archeologists believe that Borobudur is not a temple but rather a kind of advertisement for Buddhism. According to an expert on the subject, John Mikic, Borobudur was built to “to engage the mind” and to “give a visual aid for teaching a gentle philosophy of life."

Borobodur was an active religious center until the 10th century when it was abandoned for reasons that are not clear. At the beginning of the 11th century AD, because of the political situation in Central Java, divine monuments in that area, including the Borobudur Temple became completely neglected and given over to decay.According to UNESCO: the Stylistically the art of Borobudur is a tributary of Indian influences (Gupta and post-Gupta styles).



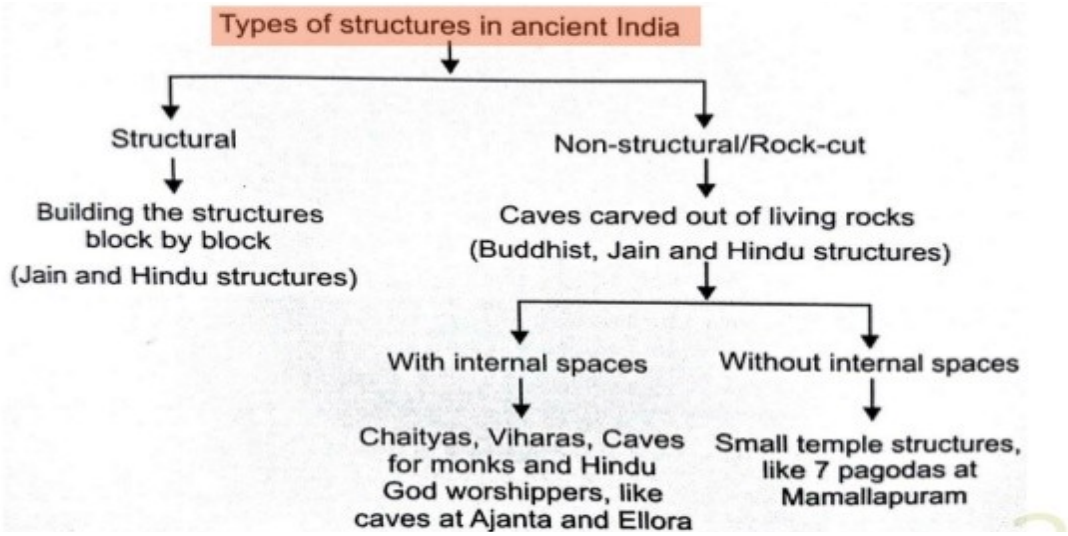
Borobudur, northwest view

Buddhist Architecture-Viharas- BUDDHIST ARCHITECTURE



The early structures that were built during the empires were permanent in nature and long lasting. Non-Structural or rock-cut means that they were carved out of mountain cliff or huge rocks.

The Buddhist Architecture began with the development of various symbols, representing aspects of the Buddha's life(563BCE- 483BCE). Indian Emperor Ashoka, not only established Buddhism as the state religion of his large Magadh empire, but also opted for the Architectural monuments to spread Buddhism in different places. The major features of this style are Stupas, Stambhas, Chaityas, Viharas. Beginning of Buddhist architecture in India was in the 3rd century BCE.. Three types of structures are associated with the religious architecture of early Buddhism: monasteries



1. (Viharas), places to venerate relics
2. (stupas), and shrines or prayer halls
3. (chaityas also called chaitya grihas), which later came to be called temples in some places.

This religion initially did not involve making of figures or idols but gradually the followers started making sculptural representations of Buddha. There are 2 phases of Buddhism:

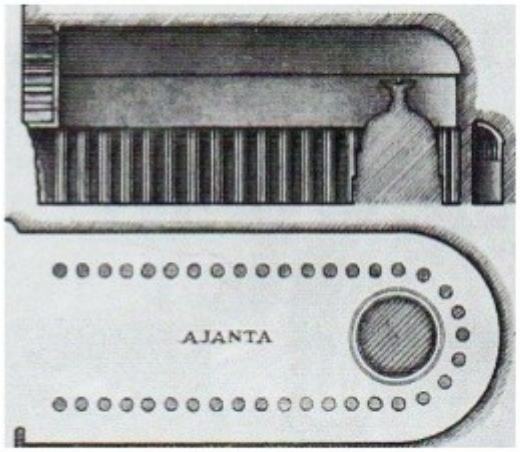
1. HINAYANA- 2ND CENTURY BC- 2ND CENTURY AD
2. MAHAYANA- 3RD CENTURY AD – 7TH CENTURY AD

Viharas initially were only temporary shelters used by wandering monks during the rainy season, but later were developed to accommodate the growing and increasingly formalized Buddhist monasticism(monkhood). An existing example is at Nalanda (Bihar). The initial function of a stupa was the veneration and safe-guarding of the relics of the Buddha. The earliest surviving example of a stupa is in Sanchi (Madhya Pradesh). In accordance with changes in religious practice, stupas were gradually incorporated into chaitya-grihas (prayer halls). These reached their high point in the 1st century BC, exemplified by the cave complexes of Ajanta and Ellora (Maharashtra). The Pagoda is an evolution of the Indian stupa. Buddhist architecture in India

•100ft by 40ft by 33ft

•Same roof ribs

•Two tiered stupa with circular base and elongated dome



Cave No 10 at Ajanta

Buddhist architecture emerged slowly in the period following the Buddha's life, along with the Hindu temple architecture. Brahmanist temples at this time followed a simple plan – a square inner space, the sacrificial arena, often with a surrounding ambulatory route separated by lines of columns, with a conical or rectangular sloping roof, behind a porch or entrance area, generally framed by freestanding columns or a colonnade. The external profile represents Mount Meru, the abode of the gods and centre of the universe. The dimensions and proportions were dictated by sacred mathematical formulae. This simple plan was adopted by Early Buddhists, sometimes adapted with additional cells for monks at the periphery (especially in the early cave temples such as at Ajanta, India). The basic plan survives to this day in Buddhist temples throughout the world. • The profile became elaborated and the characteristic mountain shape seen today in many Hindu temples was used in early Buddhist sites and continued in similar fashion in some cultures. • In others, such as Japan and Thailand, local influences and differing religious practices led to different architecture. Gupta period temple at Sanchi besides the Apsidal hall with Maurya foundation Evolution of Buddhist Architecture Early Buddhist Architecture.

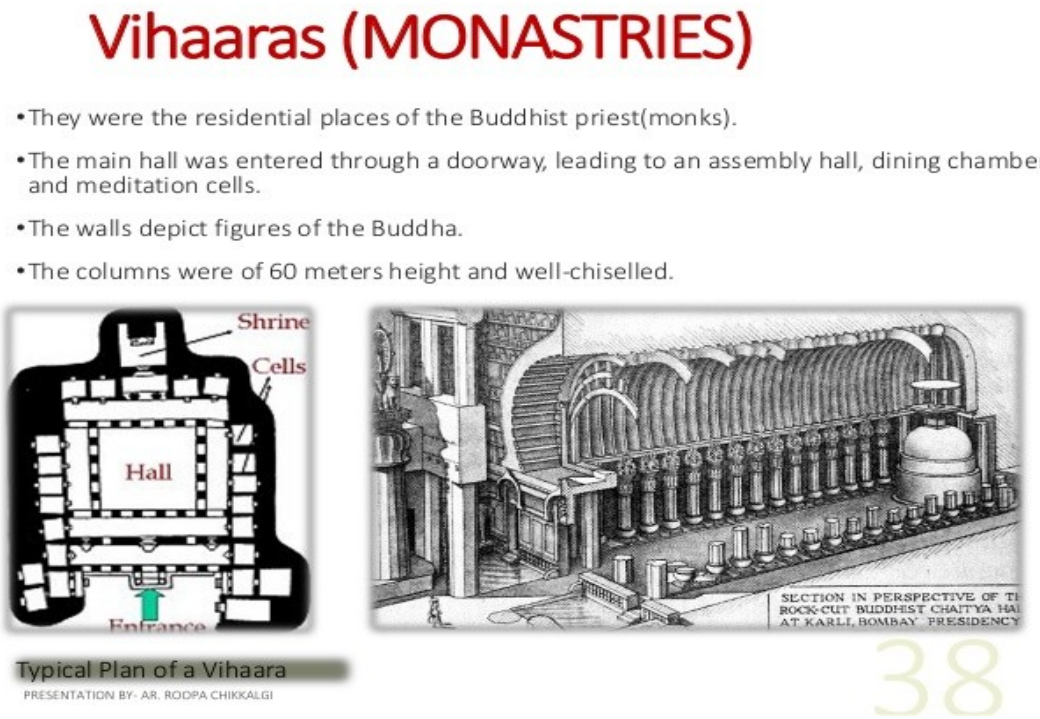
Early Buddhist temples: Early temples were often timber, and little trace remains, although stone was increasingly used. Cave temples such as those at Ajanta have survived better and preserve the plan form, porch and interior arrangements from this early period. As the functions of the monastery-temple expanded, the plan form started to diverge from the Brahmanist tradition and became more elaborate, providing sleeping, eating and study accommodation. A characteristic new development at religious sites was the stupa. Stupas were originally more sculpture than building.• One of the earliest Buddhist sites still in existence is at Sanchi, India, and this is centred on a stupa said to have been built by King Ashoka (273-236 BCE). The original simple structure is encased in a later, more decorative one, and over two centuries the whole site was elaborated upon. The four cardinal points are marked by elaborate stone gateways. As with Buddhist art, architecture followed the spread of Buddhism throughout south and east Asia

and it was the early Indian models that served as a first reference point, even though Buddhism virtually disappeared from India itself in the 10th century. The Borobudur Temple, Indonesia Buddhist Temple during Gupta Period.

Decoration of Buddhist sites became steadily more elaborate through the last two centuries BCE, with the introduction of human figures, particularly on stupas. However, the Buddha was not represented in human form until the 1st century CE. Instead, aniconic symbols were used. This is treated in more detail in Buddhist art, Aniconic phase. It influenced the development of temples, which eventually became a backdrop for Buddha images in most cases. Temples became Backdrop for Budhha images Buddhisttemples

Architectural History FEATURES OF BUDDHIST ARCHITECTURE

The major features of this style are: Stupas (Buddhist shrine) Stambhas (Pillars) Chaityas (Caves) Vihaaras (Monasteries) • Out of these, the prominent examples of Chaitya Hall and Viharas can be found in Rock-Cut Architecture. Even the Stupa can be found in certain Chaitya halls in a miniature form. Features of Buddhist architecture.



Stupas (domes) DEFINITION: Dome-shaped structures used to house sacred relics of the monks and hence also known as “Relic-shrines”. CONSTRUCTION MATERIALS: Earth materials covered with stones or bricks. The plan, elevation and the basic structure all derived from the circle. STUPA IS MOUND OF THE EARTH ENCLOSING A RELICCAN BE COMPARED WITH THE MASSIVE FORM OF THEGREAT PYRAMIDS OF EGYPT. THEY ALSO CALLED AS THUPPA IN PALI, DAGABA INSIMBALI, TOPE IN ENGLISH & DHATUGRABH IN SANSKRIT.(DHATUGRABH=RELICS PRESERVED IN VESSEL CLASSIFIED INTO THREE TYPES.:
1.SARIKA STUPA-raised over body relics.

2.PARIBHOJIKA STUPA - erected over the articles, like the bowl, the sanghati
3. UDDESHIKA STUPA- Stupas built as commemorative monuments.

Structural Features: The spherical dome symbolized the infinite space of the sky. The dome is called as anda or egg. The dome is a solid brick work is 36.60M in dia, and 16.46M high. • A large hemispherical dome which is flat at the top, and crowned by a triple umbrella or Chattra on a pedestal surrounded by a square railing or Harmika. A railing enclosed called Vedica which is about 3.35 M high leaving an ambulatory passage or pradikshina path with the gateways. The upper ambulatory passage (midhi) 4.87M high from the ground and 1.8M wide. There are four gateways known as Toronas at the cardinal points of the campus. Toronas built by ivory or metal worker. Elevation Plan.

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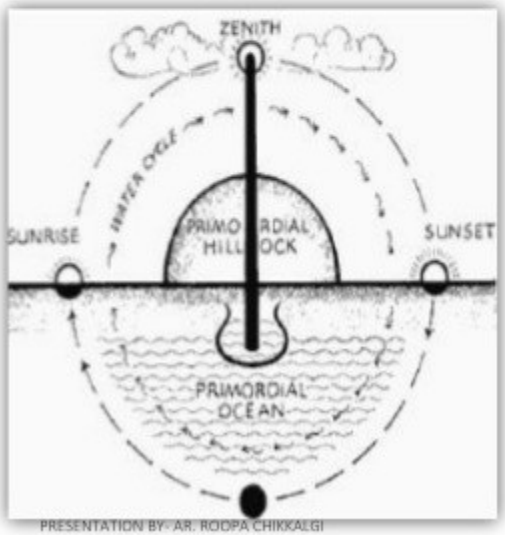

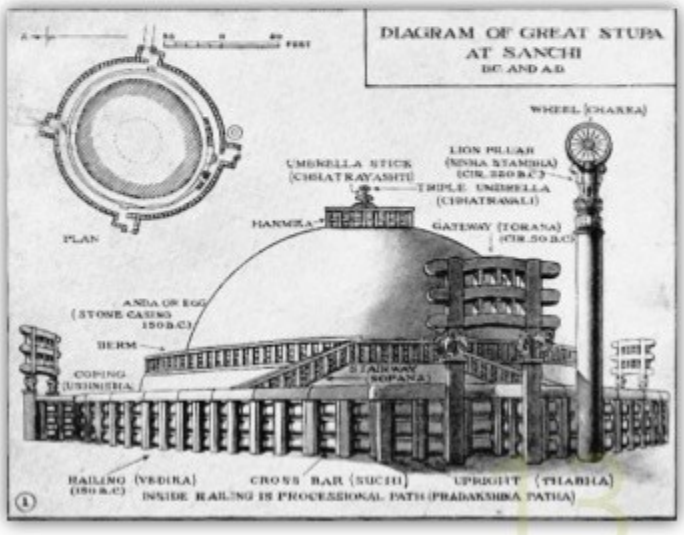

PLANNING OF SANCHI STUPA

Stone vedicaUpper Ambulatory 1.8m wide3.35m high Harmika or triple umbrella Suchi 60 cm dia Urdhava patas 45cm dia 60-90 cmc/c Ushnisha Steps leading to upper ambulatoryLower Ambulatory 3.35 m. high.

- STUPA IS MOUND OF THE EARTH ENCLOSING A RELICCAN BE COMPARED WITH THE MASSIVE FORM OF THEGREAT PYRAMIDS OF EGYPT
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Toranas at Sanchi Toranas are associated with Buddhist stupas like the Great Stupa in Sanchi, as well as with Jain and Hindu structures, and also with several secular structures. In the 1st century BCE, four elaborately carved toranas (ornamental gateways) and a balustrade encircling the entire structure were added around the sanchi stupa built during Mauryan period.

Stambhas (pillars) The next development was the free standing monolithic columns erected over sites selected because of their sacred associations. They were basically stone objects.

DEFINITION: In the context Of Hindu Mythology, stambha, is believed to be a cosmic column. DESIGN: A stambha consists of a circular column or shaft slightly tapering towards the summit (monolithic). On top of this shaft is the Persepolitan bell or the inverted lotus shaped base. Above this is the abacus on top of which rests the crowning sculpture. These three portions were carved out of a single stone (monolithic). The famous iron pillar from the Gupta period is a fine specimen, withstanding exposure to rain & storm, yet remaining smooth and unrusted bearing testimony to the mastery of Indian metal-casting.
Iron Pillar Ashokan Pillar

CHAITYAS -A Buddhist shrine or prayer hall with stupa at one end. Made for large gatherings of devotees. Made in rock-cut due to permanency of structure. Chaityas were influenced by ascetic lifestyle of Vedic period and tendency of hermits to retire in solitude. Basic Characteristics Accommodates Stupa. Apsidal Plan. No division between nave and chaitya i.e space for congregational service not clearly defined. Vaulted hall. Colonnades. Side aisles.

Why a Chaitya Hall? : The stupa evolved from being a funerary mound carrying object of worship, had a sacral value. Building needed to accommodate copies of stupa and provide shelter. A structural house for religious activities. Birth of temples with idol worship. Building had almost circular plan and a domed roof.

Chaityas (caves) The next significant development was the rock-cut architecture. Its earliest and most imp. Marvel was the Lomas Rishi Cave, at Barabar hills, Bihar. Derived from timber huts and wooden arch. of Vedic times. They were rectangular halls, with finely polished interior walls. There were a number of well proportioned pillars, generally around 35, and a semi-circular roof. Opposite one entrance stood a stupa. All the pillars have capitals on them, with carvings of a kneeling elephant mounted on bell-shaped bases.

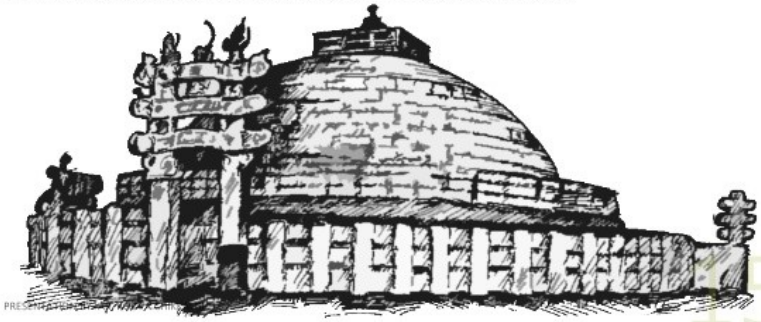
Architecturally, chaityas show similarities to Roman Design concepts of columns and arch. The monks built many structures which were carved out of a single massive rock, done with hammer and chisel, bare hands. The chaityas were almost 40 meters long, 15 meters wide and 15 meters high. Chaityas (caves)

DESIGN: The pillars had three parts: prop, which is the base which is buried into the ground; the shaft, the main body of the pillar which is polished and chiseled; and capital, the head of the pillar where figures of animals are carved. The Stupa at the end of the Chaitya Hall has an umbrella at the top. This Umbrella suggests association with Buddhism. There is a wooden facade, made out of teak wood. The facade makes it look as if the entire structure was resting on the back of an elephant with ivory tusks and metal ornaments.

Architectural Features: Wooden construction inspired from Vedic period imitated in natural rock. Supplemented with wooden surfaces for e.g.. Screens etc. (half timber construction) Shows similarities to Roman concept of column and arch, but no evidence of any relation.

Architectural FeaturesRectangular halls with finely polished interior walls. Well proportioned pillars with capitals(around 35). Semi circular roof. Pillar had three parts: prop, base buried in ground and shaft. Stupa at the end. Extensive use of motifs, decorative and symbolic.

- Sanchi Stupa is located 40 km north east of Bhopal, and 10 km from Besnagar and Vidisha in the central part of the state of Madhya Pradesh.
- Sanchi Stupa was built by Ashoka (273-236 B.C.)
- Sanchi Stupas is located on the top of the Sanchi hill, which raise about 100M high above the plain.
- The 'Great Stupa' at Sanchi is the oldest stone structure in India



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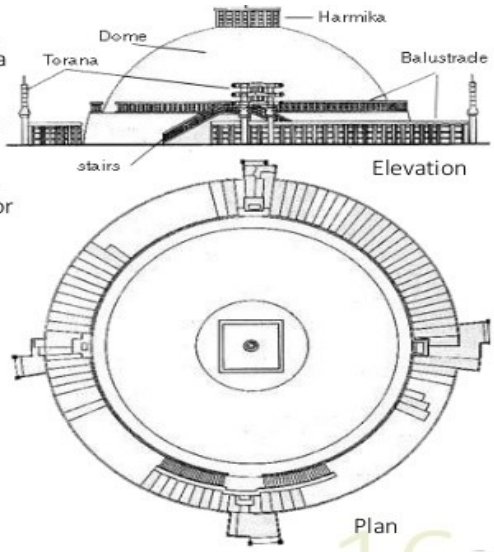
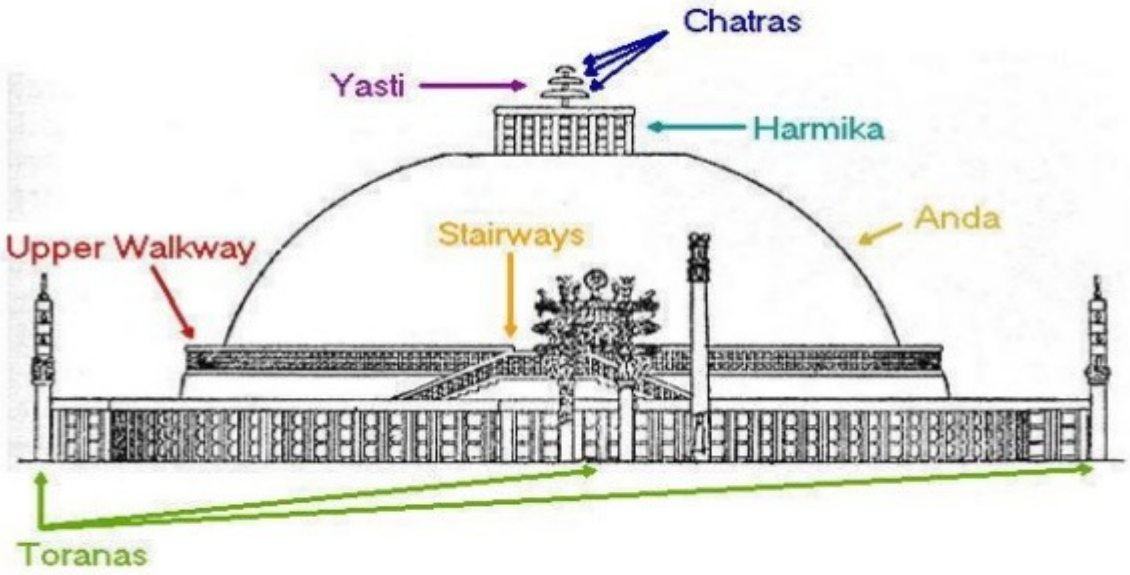


PRESENTATION BY- AR. ROOPA CHIKKALGI

16

Chaitya Arch : Chaityas normally had a great-horseshoe archway with a wall or screen below. There was sun window in center of the archway for light.
Evolution of Chaitya Hall

VIHARAS A monastery, arrangement of cells for accomodation of monks Dwellings were simply wooden construction/thatched bamboo huts Near settlements on trade routes After first century AD, Viharas came in as educational institutes



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Basic Characteristics Quadrangular court for gathering Surrounded by small cells Front wall incorporated a shrine for image of Buddha Cells had rock cut platforms for beds Viharas were not alike in design Doorways were on sides of the walls of main hall.Construction and Materials Rock-cut architecture basically used wooden construction down to joinery details Hardly structuralIn brick, corbelled arches are used, and very large bricks to for large span motifs used floral patterns, animals(used throughout the kingdom)

Vihaaras (MONASTRIES) They were the residential places of the Buddhist priest(monks). The main hall was entered through a doorway, leading to an assembly hall, dining chambers and meditation cells. The walls depict figures of the Buddha. The columns were of 60 meters height and well-chiselled. Typical Plan of a Vihaara

WHY WESTERN GHATS •Uniformity of texture in hills. Horizontally stratified. Ends in perpendicular cliffs. BUILDING STRATEGYCliff was made perpendicular Entry was made A small excavated for architect monk Excavation from top to bottom .Subsequently other cells were build. Ajanta Cave No. 10 100ft by 40ft by 33ft Same roof ribs Two tiered stupa with circular base and elongated dome. Bhaja(150 b.c) Most primitive hall. 55ft by 26ft, side aisles 3.5ft wide and high stilted vault 29ft high with closed rank wood ribs. Facades have numerous mortice holes for fixing elaborate wooden frontages Simple stupa with cylindrical base and a wooden harmikaa and chhatri. One central doorway+2 side ones. Projection balcony supported on four pillars. H shaped framework held by projection beams.

Ajanta No.9 Entire hall rock carved. Rectangular plan, ceilings of side aisles flat with perpendicular pillars. Doorway in centre and a window on either side, topped by elegant cornice. Lattice windows around archways. No wooden ribs bracing the vaults.

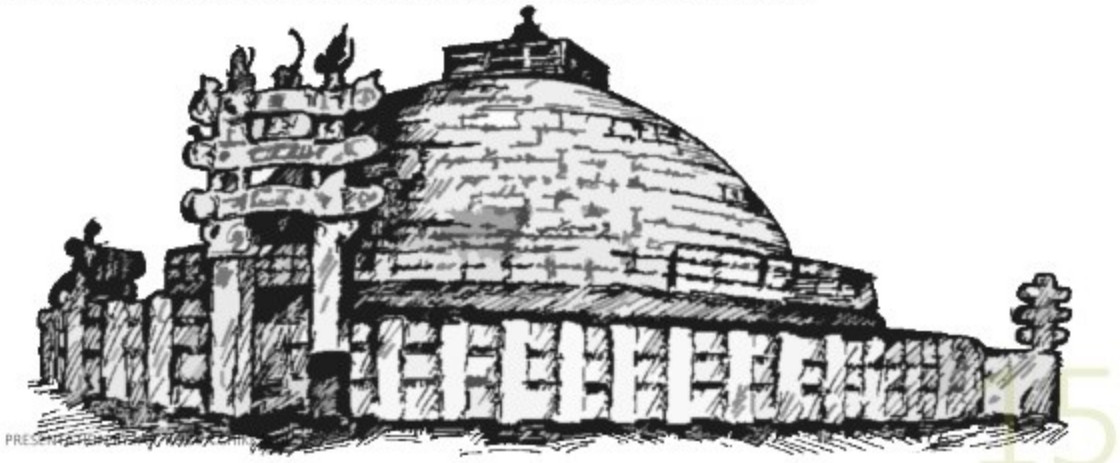
Mahayana Phase- 400 A.D -600 A.D: Basic Characteristics -Main seats of this school were Ajanta, Ellora, Auarngabad. There was a change in iconography since both schools perceived different imagery of Buddha. Elements of Chaitya Halls remained same. Viharas became finer and more elaborate. Ajanta Cave No. 26 •68ft by 36f by 31 ft. Last Ajanta Hall. More ornamented, right from pillars, elaborate triforium, and recessed panels. Portico had 3 doorways with Chaitya window above. Decline of style by excessive workmanship.

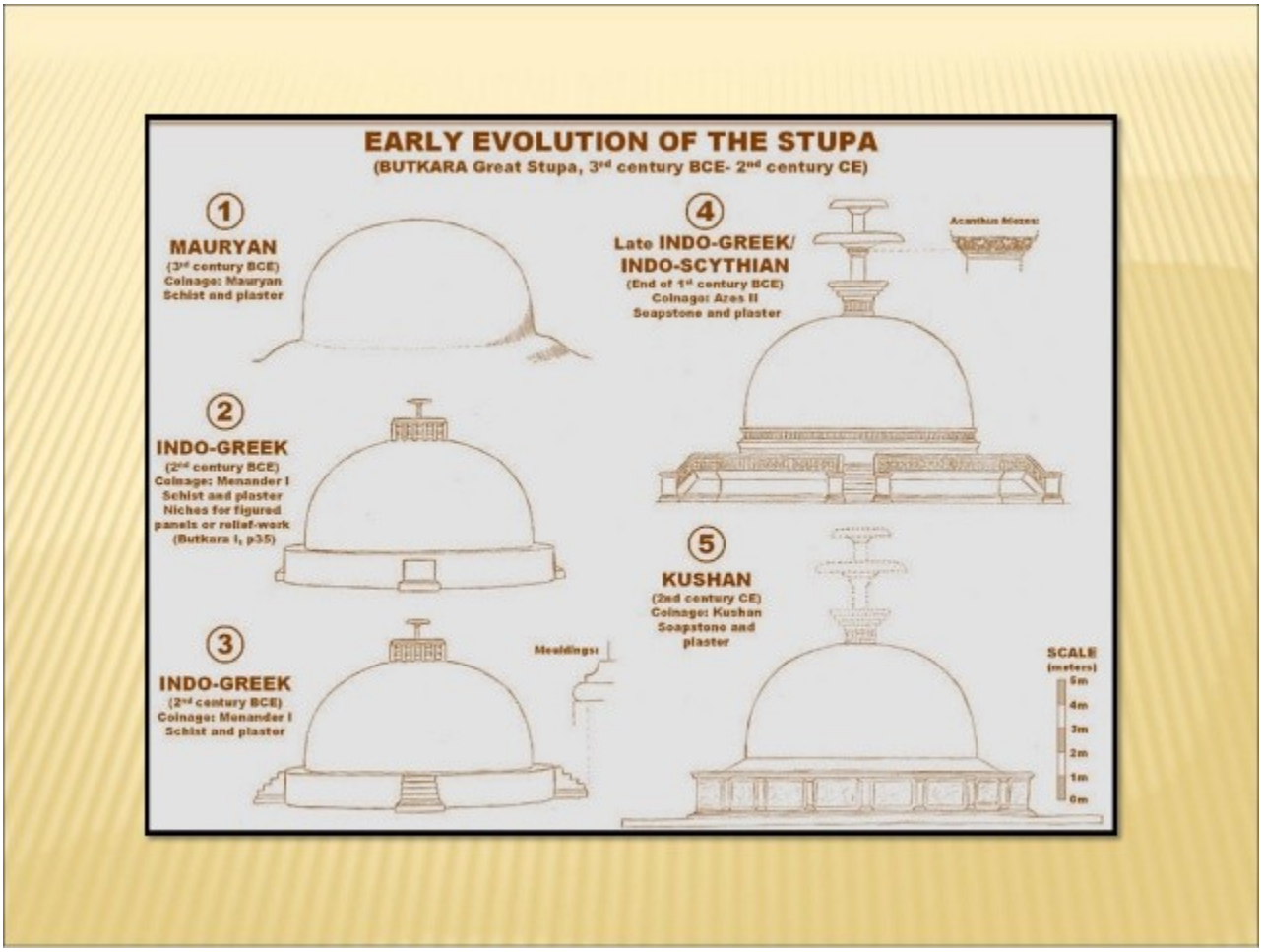
Ellora Caves:Caves excavated out of low ridge hills, Buddhists occupied best site. Dhedwada group(caves 1 to 5) and 6 to 12 were two main groups Mahanwada cave(no.5) had both monastery and hall, it had two parallel platforms for seating of priests Later group had chaitya hall no. 10 Cave no. 2 has 48 pillars colonnade attached with side gallery. Cushion pillar comes in focus now.Caves 66 to 12 -Largest monasteries. No. 12 is knows as tin thaal(thre stories), can lodge 40 priests (108ft by 60 ft). Does not have any ornamentation. Access is through pillared verandah. All three floors are different.

Inspiration and influence.Inspired from Vedic wooden construction techniques, prevalent to Buddhism coming in vogue. Inspired Indian temples, for eg. Early Brahmanical temples in South India (for eg. Chaitya window motif), temples at Sanchi. Even Jain caves got influenced from Buddhism, fro eg. Udaigiri. Spread to North East.Temples Since the same guild of artists worked for all the religions, there is hardly any difference in the treatment of the Buddhist, Brahmanical and Jain temples in a particular region at a given period. The oldest existing temple is temple at Sanchi, which is also the earliest known example of Gupta temple style. The only décor was at the entrance present with bands of scrolls and pillars. This temple lays the logical foundation of temple architecture in North India, which developed in due course a shikhara over its basic form.
The Mahabodhi Temple is a Buddhist temple in Bodh Gaya, marking the location where the Buddha, is said to have attained enlightenment. Bodh Gaya is located about 96km from Patna, Bihar. Next to the temple, on its western side, is the holy Bodhi tree and the monastery there the Bodhimanda Vihara. The tallest tower is 55 metres (180 ft) tall. Holy Bodhi tree Mahabodhi Temple

Sanchi Stupa

- Sanchi Stupa is located 40 km north east of Bhopal, and 10 km from Besnagar and Vidisha in the central part of the state of Madhya Pradesh.
- Sanchi Stupa was built by Ashoka (273-236 B.C.)
- Sanchi Stupas is located on the top of the Sanchi hill, which raise about 100M high above the plain.
- The 'Great Stupa' at Sanchi is the oldest stone structure in India





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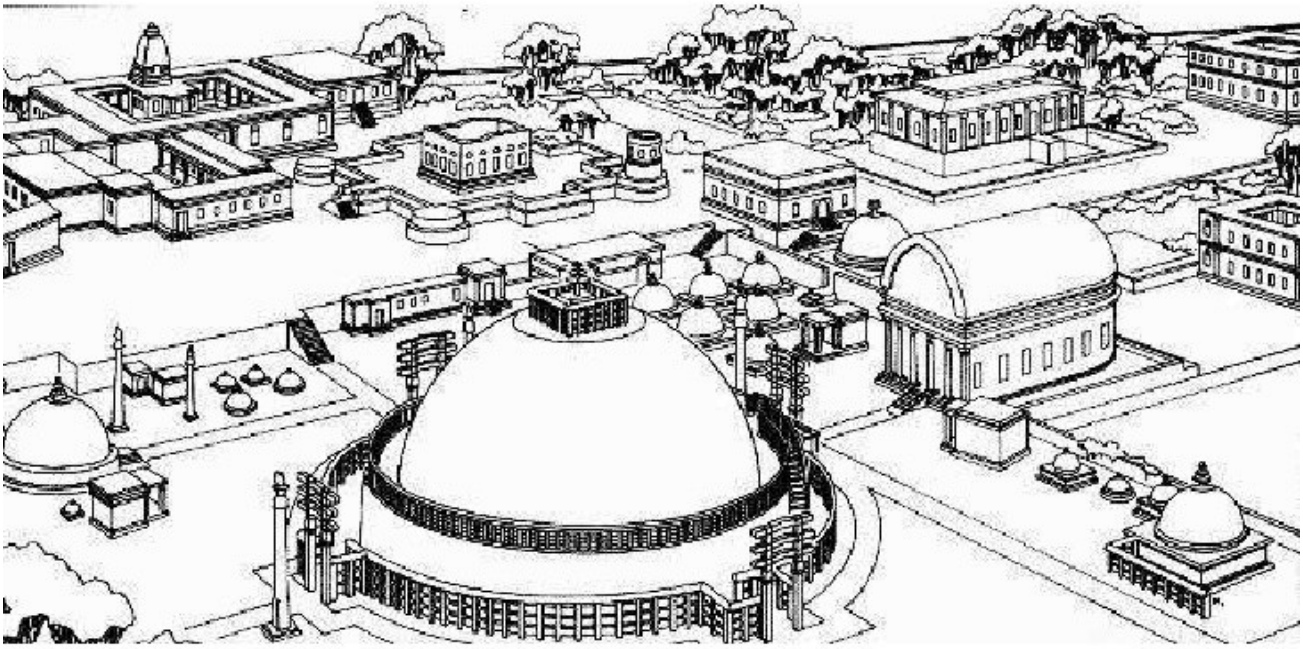
LOCATION: Stupas were erected over the sacred relics of the monks and worshiped with great reverence. They are therefore known as Relic-Shrines. The stupa more then a funeral mound was planned like a Vedic village.
Great Stupa, Sanchi (Madhya Pradesh)- Dharmaksha stupa
SITE PLANNING



There are four gateways known as Toronas at the cardinal points of the campus. Toronas built by ivory or metal worker. Plan and elevation of Sanchi Stupa.The terrace (midi) 4.87M high from the ground was added thus creating a separate and upper ambulatory passage 1.8M wide. At the base of the dome is a high circular terrace probably meant for parikrama or circumambulation and an encircling balustrade. ϖ a railing enclosed called Vedica which is about 3.35 M high leaving an ambulatory passage or pradikshina path with the gateways. ϖ a large hemispherical dome which is flat at the top, and crowned by a triple umbrella or Chattra on a pedestal surrounded by a square railing or Harmika. ϖ The dome is a solid brick work is 36.60M in dia, and 16.46M high. The spherical dome symbolized the infinite space of the sky, abode of God. The dome is called as anda or egg or.

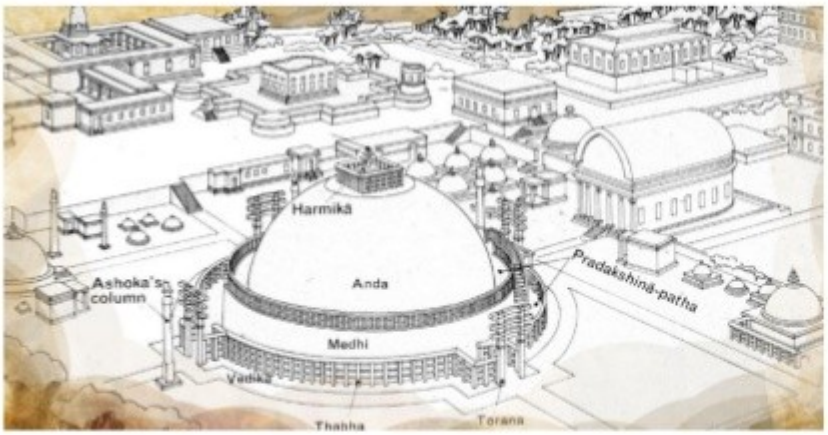
The top panels is crowned with Tri-Ratna symbol of the Buddhist trinity, Buddha, the law (dharma) and monastic community (sangha) with wheels of justice in the centre which rest on elephant sϖ The panels have volutes at their terminal ends surmounting with animal sculpture. ϖ These columns support three separate horizontal panels between each of which is row of ornamental balusters. ϖ Torona consist of 2 square upright columns with capitals or lion of elephant heads denoting strength. ϖ The total height of this erection is about 10. 36M with a width of 3M. Ashok chakra The Gateway 'Torona'ϖhaped pedestal.

FEATURES Harmika or triple umbrella Upper Ambulatory 1.8m wide3.35m high Stone vedica Ushnisha Urdhava patas 45cm dia 60-90 cmc/c Suchi 60 cm dia Lower Ambulatory 3.35 m. high Steps leading to upper ambulatory. Front View of sanchi stupa Column of Torna Front View of Torna Elephants and Yakshi of the Eastern Torana, Great Stupa, Sanchi, mid-1st century BC - AD 1st century View of Torna from upper ambulatory. these niches were mostly provided to erect Buddha's statue. Delicately carved with beautiful floral and geo-metrical patterns. Site Mapϖ

a line of sculptured ornaments.run below it ϖThe facing of stone basement has 8 niches, ϖThe Stupa consist of large tower built in stone masonry at the basement for a height of 13M and in brick masonry above for a height 34M. built by Ashoka and later rebuilt in the Gupta period. ϖ situated Benares. 6.5KM to the north of a commemorative Stupa, built in 7th centuary.

Buddhist architecture in India

- Viharas initially were only temporary shelters used by wandering monks during the rainy season, but later were developed to accommodate the growing and increasingly formalized Buddhist monasticism(monkhood). An existing example is at Nalanda (Bihar).
- The initial function of a stupa was the veneration and safe-guarding of the relics of the Buddha. The earliest surviving example of a stupa is in Sanchi (Madhya Pradesh).



- In accordance with changes in religious practice, stupas were gradually incorporated into chaitya-grihas (prayer halls).
- These reached their high point in the 1st century BC, exemplified by the cave complexes of Ajanta and Ellora (Maharashtra).
- The Pagoda is an evolution of the Indian stupa.

- The spherical dome symbolized the infinite space of the sky. The dome is called as anda or egg.
- The dome is a solid brick work is 36.60M in dia, and 16.46M high.
- A large hemispherical dome which is flat at the top, and crowned by a triple umbrella or Chattra on a pedestal surrounded by a square railing or Harmika.
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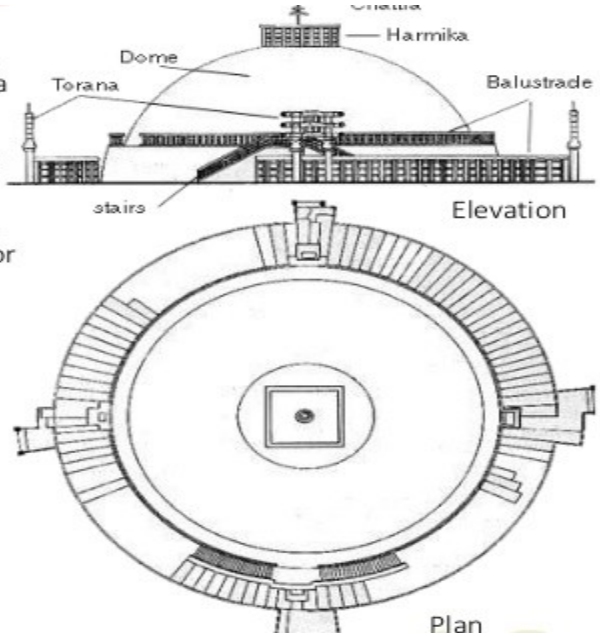
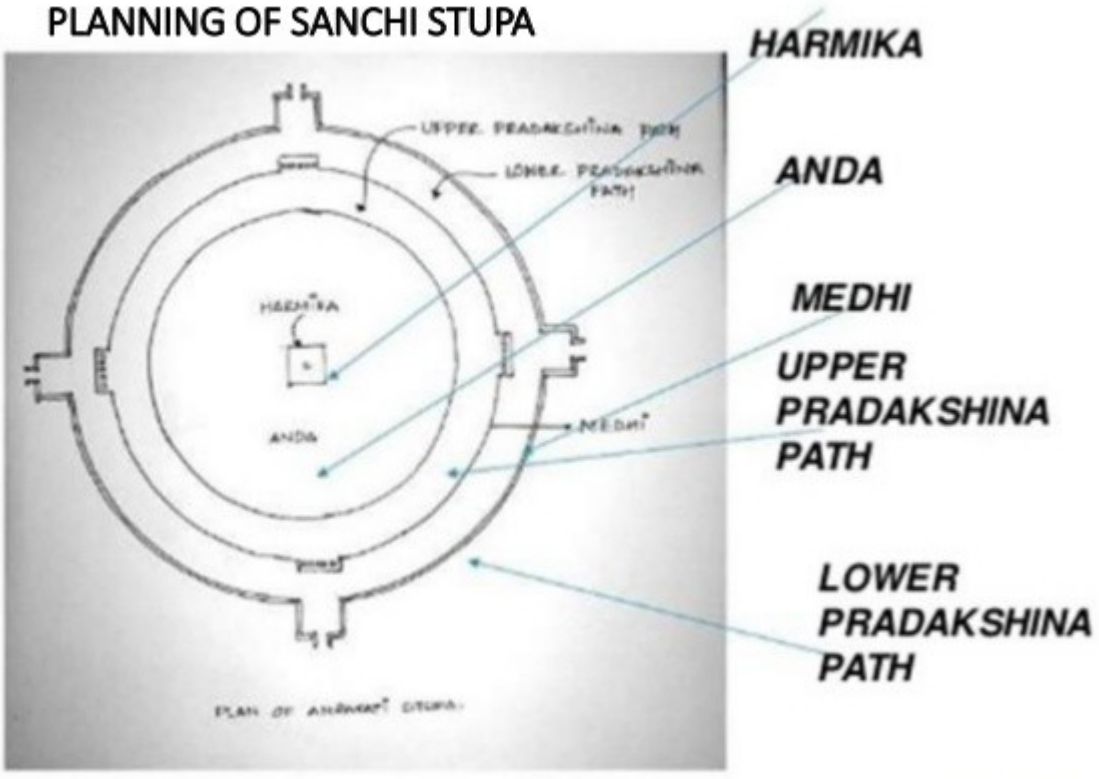


PLANNING OF SANCHI STUPA



PRESENTATION BY- AR. ROOPA CHIKKALGI

17

gateways known as 'TORANAS' at the cardinal points to the compass and are slightly staggered from the railing enclosing stupa.

•The ambulatory or pradakshina path is fenced by railing 3.35m high all around the stupa.

•Outside the railing there once stood the famous ashoka pillar, the fragments of which are noticed now to the right of southern torana

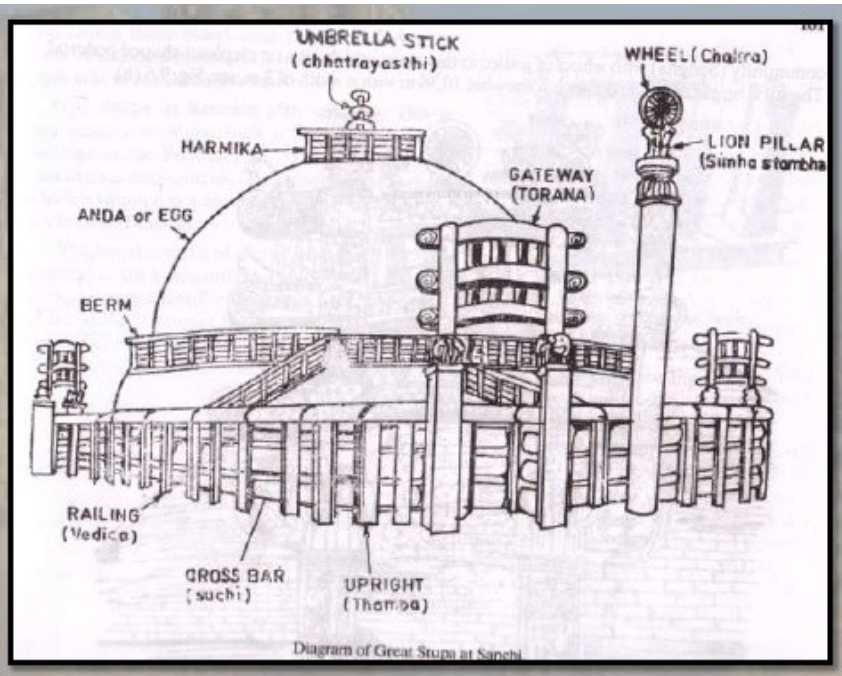


Diagram of Great Stupa at Sanchi

Buddhist Architecture- Stupa

- STUPA IS MOUND OF THE EARTH ENCLOSING A RELICCAN BE COMPARED WITH THE MASSIVE FORM OF THEGREAT PYRAMIDS OF EGYPT
- THEY ALSO CALLED AS THUPPA IN PALI, DAGABA INSIMBALI, TOPE IN ENGLISH & DHATUGRABH IN SANSKRIT.(DHATUGRABH=RELICS PRESERVED IN VESSEL

CLASSIFIED INTO THREE TYPES.

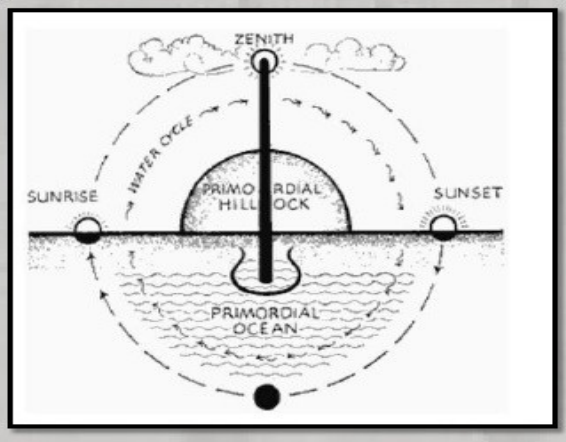
•*SARIKA STUPA*-raised over body relics.
•*PARIBHOJIKA STUPA* - erected over the articles, like the bowl, the sanghati

•UDDESHIKA STUPA- Stupas built as commemorative monuments.

PRESENTATION BY- AR. ROOPA CHIKKALG

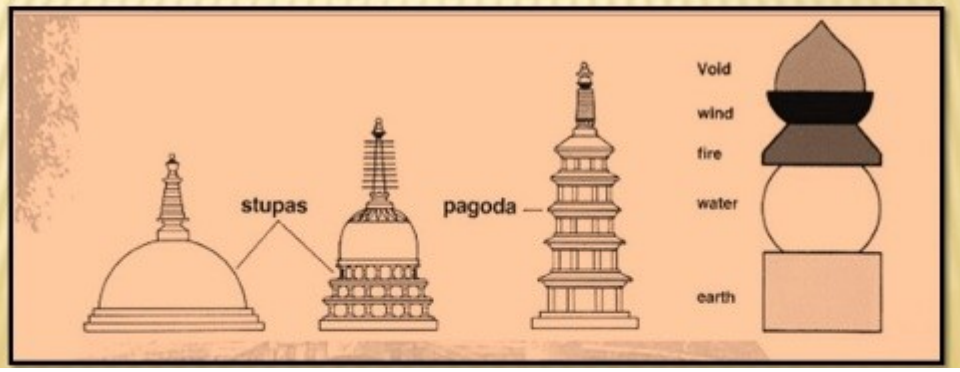
STUPA

- A stupa is a mound-like structure containing buddhist relics, typically the remains of Buddha, used by Buddhists as a place of worship.
- These stupas are the circular tumuli built of earth, covered with stone or brick, the plan, elevation, section and the total form of which were all derived from circle.



Stupa become a cosmic symbol in response to a major human condition: death. With the enlightenment of the Buddha, stupa became a particularly buddhist symbol.

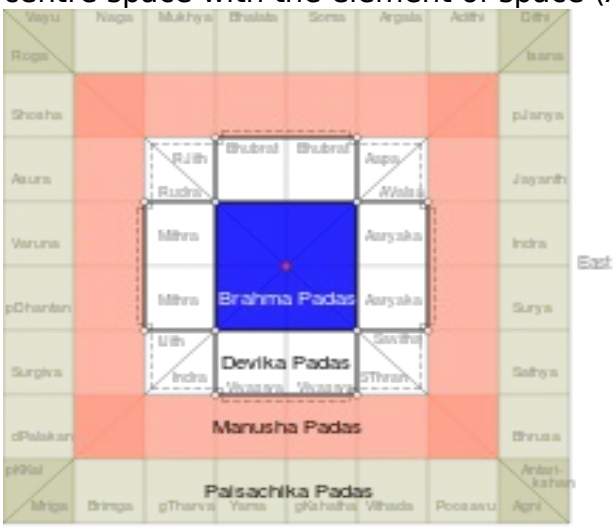
- After many years of teaching Buddha died at the age of 80 .his body was cremated and ashes were divided in to eight parts the ashes were then deposited in several special mound –shaped monuments called Stupas
- Umbrella were often mounted at the top of stupa as a sign of honor and respect
- Also known as thupa ,thope, pagoda ,dagoba



Although there have been various arguments by authors of Indian temple architecture like Stella Kramrisch and Michael W. Meister about the applicability of the Vastu Purusha Mandala as a governing device for temple architecture, it is safe to say that for formulating the layout of the temple, the Vastu Purusha Mandala has been an imperative tool. Though the 8 x 8 grid or the Manduka Vastu Mandala has been used in various temples of Indian architecture, it is to be noted that regional differences have played a major influence on the workability of the mandala design throughout India. Customarily, mandalas were spaces for the symbolic consciousness of universal theories which help in the awakening of the individual psyche. The mandalas can be thought of as diagrams that function as a cue to reach a contemplational state which is the primary aim of the tradition. The form of the temples that are based on the regulating lines of the mandala were meant to create spaces that bring about a “physical and spatial” communion between God and man. [1]

The Vastu Purusha Mandala contains a minimum of nine sections signifying the directions north, south, east, west, northeast, northwest, southeast, southwest and the centre represented as square grids. In the Vastu Purusha Mandala, the Purusha’s head is located in the northeast direction and this is considered utmost sacred. In the southwest are his feet and his knees and elbows in the northwest and southeast. Kept open and clear in the centre part of the diagram are his main organs and his torso. Starting from a single undivided square of 1 x 1 there are grid patterns ranging up to 32 x 32 thus making it 1024 sections. Architecturally, the adaptation of the Vastu Purusha Mandala has been seen in the design of houses, palaces, temples and even cities. Integrating it into the design brings a certain amount of order in the design. Here, the squares are assumed as cubes of architectural spaces.

The five elements of earth, water, fire, air and space correspond with specific sections of the Vastu Purusha Mandala. The south-west direction is associated with the element of earth(Bhumi); south-east with the elements of fire (Agni); north-east with the element of water (Jala); north-west with the element of air (Vayu) and the centre space with the element of space (Akasha). [2]



Manduka Mandala - Hindu Temple 64 padas

Indian temples are microcosm of Cosmos, acting as a connecting bridge between physical world and divine world through their proportional arrangement. Mandapa,

which were entrance porches in the beginning became an integral part of the temple plan in providing additional functions and in form providing an ex- pression of cosmos especially in elevation. Ashapuri temples analyzed here, corresponds to Nagara temple proportions varying in proportionas they belong to two different styles of nagara Architec- ture. From the study of Adam Hardy it is said that they possessed temples of different styles in Nagara other than these two. The site of Ashapuri seems to be a place for the development of the Ngara school of archigtecture.

The Gupta Dynasty ruled the North Central India between the 4th and 6th centuries CE and is considered a golden age for arts. The Dynasty was founded by Chandragupta I who acceded to the throne in 320 CE. The Guptas were the first to build Hindu and Buddist temples to fulfill a certain purpose.This style of architecture displays a variety of beautifully adorned towers, engravings and carvings, and rock cut shrines in their temples. Unfortunately very few among the many temples of the Gupta Dynasty survive today.
https://www.thehansindia.com/posts/index/Hans/2016-05-31/Understanding-Gupta-Architecture/231823

During the Gupta empire—from about 320 to 550 CE—emperors used Hinduism as a unifying religion and helped popularize it by promoting educational systems that included Hindu teachings; they also gave land to brahmins. The Gupta emperors helped make Hinduism the most popular religion on the Indian subcontinent. North Central India saw the first purpose-built Hindu (and also Buddhist) temples which evolved from the earlier tradition of rock-cut shrines.

Cosmos: In Gupta-era India, the square was considered to be the perfect shape and often used as a representation of the cosmos. Gupta temples often served as monuments to multiple deities, not just one, so this understanding of things united within the cosmos is significant. Gupta rule, while solidified by territorial expansion through war, began a period of peace and prosperity marked by advancements in science, technology, engineering, art, dialectics, literature, logic, mathematics, astronomy, religion, and philosophy. Buddhism greatly influenced the Indian religion. It gave to Indian people a simple and popular religion. It rejected ritualism, sacrifices and dominance of priestly class. Buddhism spread rapidly because its teachings were very simple and it was taught in the language of the people. The patronage of two great emperors — Ashoka and Kanishka — made it a world religion. Its opposition to the caste system made it popular among the castes that were considered low.

The Borobudur monument combines the symbolic forms of the stupa (a Buddhist commemorative moundusually containing holy relics),
temple mountain (based onMount Meru of Hindu mythology), and the mandala (a mystic Buddhist symbol of the universe, combining the square as earth and

The Shailendra dynasty (IAST: *Śailēndra* derived from Sanskrit combined words *Śaila* and *Indra*, meaning "King of the Mountain", was the name of a notable Indianised dynasty that emerged in 8th-century Java, whose reign signified a cultural renaissance in the region. The Shailendras were active promoters

of Mahayana Buddhism with the glimpses of Hinduism, and covered the Kedu Plain of Central Java with Buddhist monuments, one of which is the colossal stupa of Borobudur.The Shailendras are considered to have been a thalassocracy and ruled vast swathes of maritime Southeast Asia, however they also relied on agricultural pursuits, by way of intensive rice cultivation on the Kedu Plain of Central Java. The dynasty appeared to be the ruling family of both the Medang Kingdom of Central Java, for some period, and the Srivijaya Kingdom in Sumatra.

The inscriptions created by Shailendras use three languages; Old Malay, Old Javanese, and Sanskrit - written either in the Kawi alphabet, or pre-Nāgarī script. The use of Old Malay has sparked speculation of a Sumatran origin, or Srivijayan connection of this family. On the other hand, the use of Old Javanese suggests their firm political establishment on Java. The use of Sanskrit usually indicates the official nature, and/or religious significance, of the event described in any given inscription. After 824, there are no more references to the Shailendra house in the Javanese ephigraphic record. Around 860 the name re-appears in the Nalanda inscription in India. According to the text, the king Devapaladeva of Bengala (Pala Empire) had granted 'Balaputra, the king of Suvarna-dvipa' (Sumatra) the revenues of 5 villages to a Buddhist monastery near Bodh Gaya. Balaputra was styled a descendant from the Shailendra dynasty and grandson of the king of Java.
From Sumatra, the Shailendras also maintained overseas relations with the Chola kingdom in Southern India, as shown by several south Indian inscriptions. An 11th-century inscription mentioned the grant of revenues to a local Buddhist sanctuary, built in 1005 by the king of the Srivijaya. In spite the relations were initially fairly cordial, hostilities had broken out in 1025.

Rajendra Chola I the Emperor of the Chola dynasty conquered some territories of the Shailendra Dynasty in the 11th century. The devastation caused by Chola invasion of Srivijaya in 1025, marked the end of Shailendra family as the ruling dynasty in Sumatra. The last king of Shailendra dynasty — the Maharaja Sangrama Vijayatunggavarman — was imprisoned and taken as hostage. Nevertheless, amity was re-established between the two states, before the end of the 11th century. In 1090 a new charter was granted to the old Buddhist sanctuary, it is the last known inscription with a reference to the Shailendras. With the absence of legitimate successor, Shailendra dynasty seems ceased to rule. Other family within Srivijaya mandala took over the throne

The Sailendras and indian buddhism The rise of the pāla dynasty in the 8th century ad brought paradigm shifts in Buddhist text, ritual, and sacred architecture that sent cultural waves across the expanding maritime and land trade routes of Asia.The architectural concepts travelled in the connected Buddhist world between the Ganges valley and Java. A movement of architectural ideas can be seen from studying the corpus of the temples in the Pāla (750–1214 AD) and Śailendra (775–1090 AD)domains of India and Indonesia. This led to a paradigm shift in the design of a *stūpa* architecture at Kesariya (Bihar) that emphasizes the arrangement of deities in the circular maṇḍalic fashion with a certain numerological configuration of life-size Buddha figures placed in the external niches of the monument. This new architectural concept possibly played a key role in the development of a more elaborate structure of Borobudur in Java.The architectural linkages emerge stronger

with the central fivefold structure of the temples of the Pālas and Śailendras. In order to make the essential comparison, a quick method of drawing architectural plans is developed that is based on the basic measurements and not archaeological plans.

Architectural development in *stūpa* structure: The main archaeological sites of the middle and lower Ganges plain were recorded in the 19th century by Alexander Cunningham, following the travel accounts of the Chinese scholar-pilgrims Faxian (c. 337–422) and Xuanzang (c. 602–64). Northeast India contained not only early Buddhist *stūpa*s and monastic complexes, but also a range of *stūpa* structures that advanced from the traditional hemispherical *stūpa* of Sanchi, through the cruciform, terraced *stūpa* structure of Nandangaṛh to the elaborate *stūpa-maṇḍala* of Kesariya. Most of the Pāla structures that may have served as a model for Central Javanese temples are in dilapidated state today, making it difficult to track the architectural borrowings.

But since 1998, the ASI excavations of some parts of Kesariya Stupa in Bihar,India have uncovered striking design similarities with the massive Central Javanese *stūpa* of Borobudur, whose stepped pyramid structure and maṇḍalic arrangement of deities in circular

This article demonstrates how the spread of Buddhism through maritime routes was closely linked with commercial activities, and how these networks were different from overland routes. It also provides a survey on early India–China networks and introduces the activities of Buddhist monks and the importance of Śrīvijayan rulers and their contribution to the maritime spread of Buddhism. In the second part, the article discusses the role of Sri Lanka and the Bay of Bengal networks in the maritime transmission of Buddhism. It shows that Buddhism spread in various forms from one cultural zone of Asia to another. It also demonstrates that the transmission of Buddhist doctrines, images and texts was a complex process that involved itinerant monks, traders and travellers.[1]
The Buddhas of Borobudur, for example, resemble in some ways the stone Buddhas of the Pāla Buddhist monastery of Ratnagiri in Odisha . There are unresolved debates about the origin of the Śailendra dynasty69 and their sudden rise to power in Central Java in c. 750–1090 that coincided with a massive surge in temple construction that included Borobudur (c. 760–830) and Candi Kalasan.

The construction dates of Buddhist monuments of the Śailendras and the Pālas are close and they have many design features in common. We have already seen how the design ideas for Buddhist art and architecture were circulating from the 5th century. It was the network of monks, artists, and craftsmen that made possible the construction of the huge monuments and ritual centres.

The first record of the association of the Śailendras and Pāla India is dated to the Kelurak inscription of c. 778 and the last inscription found in India referring to Śailendras is the smaller Leiden copperplate inscription of c. 1090.By then, the ties between the two states had been sustained for more than three centuries. [2]

From an architectural point of view, a monument like Borobudur can only have been the culmination of a long period of artistic gestation. Wolff Schoemaker (1924: 22) suggests three to four centuries of an autochthonous gestation period and argues about the lack of an autonomous development of sculpture in Java. Given the Śailendra-Pāla contacts and the construction of the earlier Śaiva temples on the Dieng plateau, it is not beyond the bounds of possibility in this connected Buddhist world that a breakthrough development in the Pāla domain, which transformed a *stūpa* into a *maṇḍala* of life-size Buddhas, was enhanced with narrative reliefs at Somapura and Vikramaśīla and reached its ultimate form of expression on Javanese soil. Jordaan has argued that the Śailendras built their monuments in direct cooperation with Indian architects and craftsmen. This seems possible at the high conceptual level of architectural design, but at the level of relief carving and highly innovative *stūpikā* design there is no trace of non-Javanese influences.[3]

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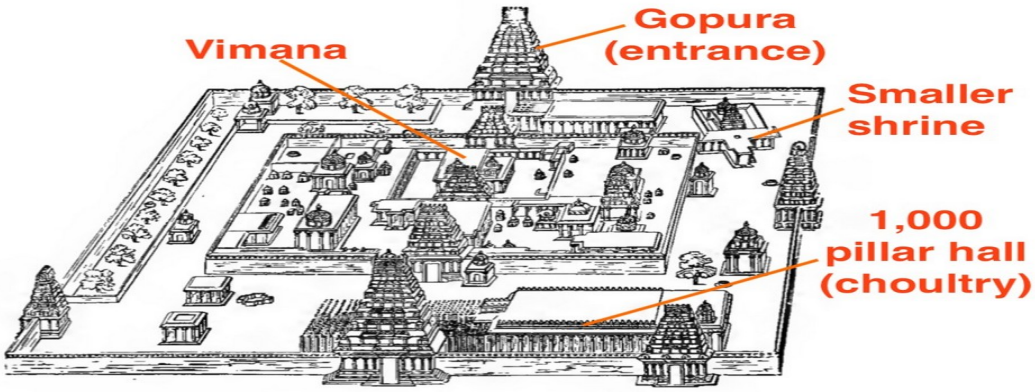


Temple at Tiruvallûr (from Râm Râz's Essay on the Architecture of the Hindus).

MANDALA

A mandala "circle" is a geometric configuration of symbols. In various spiritual traditions, mandalas may be employed for focusing attention of practitioners and adepts, as a spiritual guidance tool, for establishing a sacred space and as an aid to meditation and trance induction. In the Eastern religions of Hinduism, Buddhism, Jainism and Shintoism it is used as a map representing deities, or specially in the case of Shintoism, paradises, kami or actual shrines.

In New Age, the mandala is a diagram, chart or geometric pattern that represents the cosmos metaphysically or symbolically; a time-microcosm of the universe, but it originally meant to represent wholeness and a model for the organizational structure of life itself, a cosmic Religious meaning

In Hinduism, a basic mandala, also called a *yantra*, takes the form of a square with four gates containing a circle with a center point. Each gate is in the general shape of a T. Mandalas often have radial balance.

A *yantra* is similar to a mandala, usually smaller and using a more limited colour palette. It may be a two- or three-dimensional geometric composition used in *sadhanas*, puja or meditative rituals, and may incorporate a mantra into its design. It is considered to represent the abode of the deity. Each *yantra* is unique and calls the deity into the presence of the practitioner through the elaborate symbolic geometric designs. According to one scholar, "Yantras function as revelatory symbols of cosmic truths and as instructional charts of the spiritual aspect of human experience"

Many situate *yantras* as central focus points for Hindu tantric practice. *Yantras* are not representations, but are lived, experiential, nondual realities. As Khanna describes:
Despite its cosmic meanings a *yantra* is a reality lived. Because of the relationship that exists in the Tantras between the outer world (the macrocosm) and man's inner world (the microcosm), every symbol in a *yantra* is ambivalently resonant in inner–outer synthesis, and is associated with the subtle body and aspects of human consciousness.

The term 'mandala' appears in the Rigveda as the name of the sections of the work, and Vedic rituals use mandalas such as the Navagraha mandala to this day.
The science behind these constructions is that, the temple architecture gives cosmic force to the main idol in the Garbha Griha. Firstly, the Juathaskambam acts like an antenna and receives the cosmic force from the space and through a subversive channel it is linked to the main idol in the Garbha-graha. The cosmic force continuously flows through the Jathuskambam to the statue and energies it. Secondly, the celestial power fetched through the field gives the idol effulgence and

metaphysical powers. The cosmic-force is additionally maintained by noise waves (Vedic chants – Read about the Significance of Chanting) and the pyramid like tomb. The pyramid like construction helps to intensify and protect the cosmic force. These are the reasons for anybody to feel a positive energy, goodness, serenity or divinity when we approach the interior sanctum.
The copper plate has the propensity to suck part the Ether when that penetrates from the copper and the Herbal resulting in powerful atomic force that penetrates through the skin to heal the human, and that's why the copper plate is put on the temple tower.

The idol is washed with various materials (milk, sandal paste, oil) to preserve the idols. The idol is adorned with flowers and ornaments for mental and visual boost. But the diverse postures of the idol (sitting/standing, number of hands, weapons they hold) do have meaning in emitting the cosmic force.
Thus the temples serve up as the scientific room to receive the shower of cosmic force or God's blessing.
From my understanding Temple Gopurams are an important part of any Hindu temples and there are specific reasons for their existence. They are:
1) Temple Gopurams are built to receive the positive energy from the universe. Cosmic rays will be received by the Gopuram and it will be passed to the statue in the temple.
2) Gopuram will also receive the energy from thunder/lightning and pass it to the ground. So it acted as a layer of protection for the temple and the nearby areas.
3) Temple Gopuram were built largely to depict the culture and art of ancient people
4) It also used to act as a landmark in olden days to find out the cities, way to different places.
5) In olden days , kings built temples in order to give job to the people of the country and along with that future generations will come to know the architectural talents that ancient people had.
6) The small carvings and statues in temple gopuram depict the story of the god and also will show life lessons.

Site and plan of Borobudur

Borobudur covers a total surface area of around 2,500 m2. The monument is a marvel of design, decorated with 2,672 relief panels and originally 504 Buddha statues. The architecture and stonework of this temple have no equal. It was built without using any cement or mortar! The structure is like a set of massive interlocking Lego blocks held together without any glue. Built with about 2,000,000 cubic feet (56,600 cubic metres) of gray volcanic stone, **Borobudur** encloses a small hill and is **shaped** like a stepped pyramid with three major levels—a square base, a middle level of five square terraces, and an upper level of three circular terraces—totaling, in effect, nine lesser sections It was built in three tiers: a pyramidal base with five concentric square terraces, the trunk of a cone with three circular platforms and, at the top, a monumental stupa.

Architecture: From Darkness to Light: The idea of moving from the darkness into the light is the final element of the experience of Borobudur. The temple's pathway takes one from the earthly realm of desire (*kamadhatu*), represented and documented on the hidden narratives of the structure's earthbound base, through the world of forms (*rupadhatu*) as expounded on the narratives carved along the four galleries set at right angles, until one finally emerges into the realm of formlessness (*arupadhatu*) as symbolized and manifested in the open circular terraces crowned with 72 stupas.

However, the symbolization of enlightenment these stupas represent is not intended to be merely aesthetic. Buddhist stupas and mandalas are understood as "spiritual technologies" that harness spiritual "energies" in the creation of sacred space. The repetition of form and the circumabulatory progress of the pilgrim mimic, and thereby access, the cosmological as a microcosm. The clockwise movement around the cosmic center reproduces the macrocosmic path of the sun. Thus, when one emerges from the dark galleries representing the realms of desire and form into the light of the "formless" circular open air upper walkways, the material effect of light on one's physical form merges concomitantly with the spiritual enlightenment generated by the metaphysical journey of the sacred path.

Light, in all its paradoxes, is the ultimate goal. The crowning stupa of this sacred mountain is dedicated to the “Great Sun Buddha” Vairocana. The temple sits in cosmic proximity to the nearby volcano Mt. Merapi. During certain times of the year the path of the rising sun in the East seems to emerge out of the mountain to strike the temple’s peak in radiant synergy. Light illuminates the stone in a way that is intended to be more than beautiful. The brilliance of the site can be found in how the Borobudur mandala blends the metaphysical and physical, the symbolic and the material, the cosmological and the earthly within the structure of its physical setting and the framework of spiritual paradox.

Borobudur and the concept of path in Buddhism

Paths have been pervasive in human civilization. We are all familiar with the streets, trails, and lanes along which we routinely travel. Ancient Roman roads are utilized in some places even today. In contemporary computer culture we follow “paths” on webpages as we find our way to the information or experience we are searching for or find unexpectedly. There are simulated paths in complex first-person virtual reality video environments, where role-playing games formulate their content around the path to be conquered. The idea of path is an important concept in Buddhism, and is essential in understanding the meaning and purpose of one of the most remarkable and impressive monuments in the world: Borobudur.

Borobudur, Indonesia (photo: Claire André, CC BY-NC-ND 2.0)

Located on the island of Java in Indonesia, the rulers of the Śailendra Dynasty built the Temple of Borobudur around 800 C.E. as a monument to the Buddha (exact dates vary among scholars). The temple (or candi in Javanese, pronounced “chandi”) fell into disuse roughly one hundred years after its completion when, for still unknown reasons, the rulers of Java relocated the governing center to another part of the island. The British Lieutenant Governor on Java, Sir Thomas Stamford Raffles, only rediscovered the site in 1814 upon hearing reports from islanders of an incredible sanctuary deep within the island’s interior.

photo: Wilson Loo Kok Wee (CC BY-NC-ND 2.0)

Set high upon a hill vertically enhanced by its builders to achieve a greater elevation, Borobudur consists of a series of open-air passageways that radiate around a central axis mundi (cosmic axis). Devotees circumambulate clockwise along walkways that gradually ascend to its uppermost level. At Borobudur, geometry, geomancy, and theology all instruct adherents toward the ultimate goal of enlightenment. Meticulously carved relief sculptures mediate a physical and spiritual journey that guides pilgrims progressively toward higher states of consciousness.

The entire site contains 504 statues of the Buddha. 1460 stone reliefs on the walls and opposite balustrades decorate the first four galleries, with an additional 1212 decorative reliefs augmenting the path. The relief sculptures narrate the Buddha’s teachings (the Dharma), depict various events related to his past lives (Jataka tales), and illustrate didactic stories taken from important Buddhist scriptures (sutras). Interestingly, another 160 relief sculptures adorn the base of the monument, but are concealed behind stone buttresses that were added shortly

after the building’s construction in order to further support the structure’s weight. The hidden narrative reliefs were photographed when they were discovered in the late 19th century before the stones were put back to help ensure the temple’s stability.

Borobudur, photo: Gildardo Sánchez (CC BY-NC-SA 2.0)

Moving past the base and through the four galleries, the devotee emerges onto the three upper terraces, encountering 72 stupas each containing a three-dimensional sculpture of a seated Buddha within a stone latticework. At the temple’s apex sits the large central stupa, a symbol of the enlightened mind.

The archaeological excavation into Borobudur during reconstruction suggests that adherents of Hinduism or a pre-Indic faith had already begun to erect a large structure on Borobudur's hill before the site was appropriated by Buddhists. The foundations are unlike any Hindu or Buddhist shrine structures, and therefore, the initial structure is considered more indigenous Javanese than Hindu or Buddhist.

Design

Borobudur ground plan taking the form of a Mandala

The monument is both a shrine to the **Lord Buddha** and a place for Buddhist pilgrimage.The journey for pilgrims begins at the base of the monument and follows a path around the monument and ascends to the top through three levels symbolic of Buddhist cosmology: ***Kāmadhātu*** (the world of desire), ***Rupadhatu*** (the world of forms) and ***Arupadhatu*** (the world of formlessness).

Zone 1: Kamadhatu *(The phenomenal world, the world inhabited by common people)*

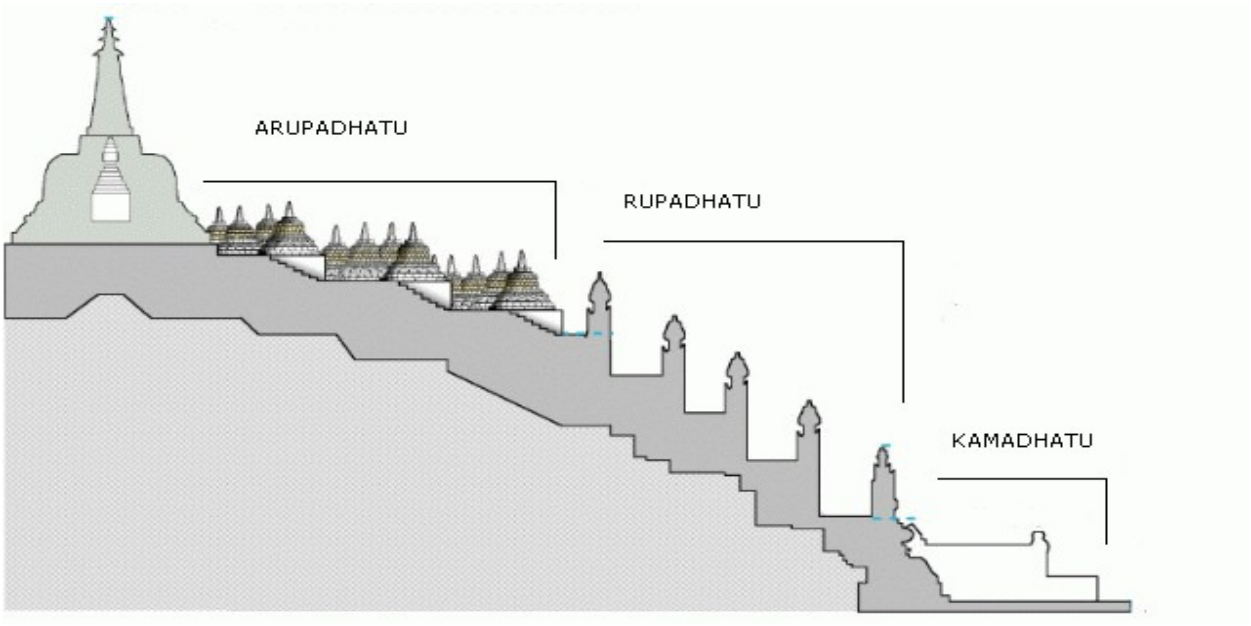
Borobudur's hidden **Kamadhatu** level consists of 160 reliefs depicting scenes of Karmawibhangga Sutra, the law of cause and effect. Illustrating the human behavior of desire, the reliefs depict robbing, killing, rape, torture and defamation. A corner of the covering base has been permanently removed to allow visitors to see the hidden foot, and some of the reliefs.

Zone 2: Rapudhatu *(The transitional sphere, humans are released from worldly matters)*

The four square levels of **Rapadhatu** contain galleries of carved stone reliefs, as well as a chain of niches containing statues of Buddha. In total there are 328 Buddha on these balustrade levels which also have a great deal of purely ornate reliefs. The Sanskrit manuscripts that are depicted on this level over 1300 reliefs are Gandhawyuha, Lalitawistara, Jataka and Awadana. They stretch for 2.5km. In addition there are 1212 decorative panels.

Zone 3: Arupadhatu (*The highest sphere, the abode of the gods)* The three circular terraces leading to a central dome or stupa represent the rising above the

world, and these terraces are a great deal less ornate, the purity of form is paramount.
The terraces contain circles of perforated stupas, an inverted bell shape, containing sculptures of Buddha, who face outward from the temple. There are 72 of these stupas in total. The impressive central stupa is currently not as high as the original version,
which rose 42m above ground level, the base is 9.9m in diameter. Unlike the stupas surrounding it, the central stupa is empty and conflicting reports suggest that the central void contained relics, and other reports suggest it has always been empty.
The monument guides pilgrims through an extensive system of stairways and corridors with 1,460 narrative relief panels on the walls and the balustrades. Borobudur has the largest and most complete ensemble of Buddhist reliefs in the world.
Borobudur is built as a single large stupa and, when viewed from above, takes the form of a giant tantric Buddhist *mandala*, simultaneously representing the Buddhist cosmology and the nature of mind. The original foundation is a square, approximately 118 metres (387 ft) on each side. It has nine platforms, of which the lower six are square and the upper three are circular. The upper platform features seventy-two small stupas surrounding one large central stupa. Each stupa is bell-shaped and pierced by numerous decorative openings. Statues of the Buddha sit inside the pierced enclosures.



The design of Borobudur took the form of a step pyramid. Previously, the prehistoric Austronesian megalithic culture in Indonesia had constructed several earth mounds and stone step pyramid structures called *punden berundak* as discovered in Pangguyangan site near Cisolokand in Cipari near Kuningan. The construction of stone pyramids is based on native beliefs that mountains and high places are the abode of ancestral spirits or hyangs. The *punden berundak* step pyramid is the basic design in Borobudur, believed to be the continuation of older megalithic tradition incorporated with Mahayana Buddhist ideas and symbolism.

As mentioned earlier the monument's three divisions symbolize the three "realms" of Buddhist cosmology, namely *Kamadhatu* (the world of desires), *Rupadhatu* (the world of forms), and finally *Arupadhatu* (the formless world). Ordinary sentient beings live out their lives on the lowest level, the realm of desire. Those who have burnt out all desire for continued existence leave the world of desire and live in the world on the level of form alone: they see forms but are not drawn to them. Finally, full Buddhas go beyond even form and experience reality at its purest, most fundamental level, the formless ocean of nirvana. The liberation from the cycle of Saṃsāra where the enlightened soul had no longer attached to worldly form corresponds to the concept of Śūnyatā, the complete voidness or the nonexistence of the self. *Kāmadhātu* is represented by the base, *Rupadhatu* by the five square platforms (the body), and *Arupadhatu* by the three circular platforms and the large topmost stupa. The architectural features between the three stages have metaphorical differences. For instance, square and detailed decorations in the *Rupadhatu* disappear into plain circular platforms in the *Arupadhatu* to represent how the world of forms—where men are still attached with forms and names—changes into the world of the formless.

Congregational worship in Borobudur is performed in a walking pilgrimage. Pilgrims are guided by the system of staircases and corridors ascending to the top platform. Each platform represents one stage of enlightenment. The path that guides pilgrims was designed to symbolize Buddhist cosmology.

In 1885, a hidden structure under the base was accidentally discovered. The "hidden footing" contains reliefs, 160 of which are narratives describing the real *Kāmadhātu*. The remaining reliefs are panels with short inscriptions that apparently provide instructions for the sculptors, illustrating the scenes to be carved. The real base is hidden by an encasement base, the purpose of which remains a mystery. It was first thought that the real base had to be covered to prevent a disastrous subsidence of the monument into the hill. There is another theory that the encasement base was added because the original hidden footing was incorrectly designed, according to *Vastu Shastra*, the Indian ancient book about architecture and town planning. Regardless of why it was commissioned, the encasement base was built with detailed and meticulous design and with aesthetic and religious consideration.

Building structure

Approximately 55,000 cubic metres (72,000 cu yd) of andesite stones were taken from neighbouring stone quarries to build the monument. The stone was cut to size, transported to the site and laid without mortar. Knobs, indentations and dovetails were used to form joints between stones. The roof of stupas, niches and arched gateways were constructed in corbelling method. Reliefs were created *in situ* after the building had been completed.

The monument is equipped with a good drainage system to cater to the area's high stormwater run-off. To prevent flooding, 100 spouts are installed at each corner, each with a unique carved gargoyle in the shape of a giant or makara.

Hilly Construction: Borobudur differs markedly from the general design of other structures built for this purpose. Instead of being built on a flat surface, Borobudur is built on a natural hill. However, construction technique is similar to other temples in Java. Without the inner spaces seen in other temples, and with a general design similar to the shape of pyramid, Borobudur was first thought more likely to have

served as a *stupa*, instead of a temple. A *stupa* is intended as a shrine for the Buddha. Sometimes stupas were built only as devotional symbols of Buddhism. A temple, on the other hand, is used as a house of worship. The meticulous complexity of the monument's design suggests that Borobudur is in fact a temple.
The basic unit of measurement used during construction was the *tala*, defined as the length of a human face from the forehead's hairline to the tip of the chin or the distance from the tip of the thumb to the tip of the middle finger when both fingers are stretched at their maximum distance. The unit is thus relative from one individual to the next, but the monument has exact measurements. A survey conducted in 1977 revealed frequent findings of a ratio of 4:6:9 around the monument. The architect had used the formula to lay out the precise dimensions of the fractal and self-similar geometry in Borobudur's design. This ratio is also found in the designs of Pawon and Mendut, nearby Buddhist temples. Archeologists have conjectured that the 4:6:9 ratio and the *tala* have calendrical, astronomical and cosmological significance, as is the case with the temple of Angkor Wat in Cambodia.The main structure can be divided into three components: base, body, and top. The base is 123 m × 123 m (404 ft × 404 ft) in size with 4 metres (13 ft) walls.[] The body is composed of five square platforms, each of diminishing height. The first terrace is set back 7 metres (23 ft) from the edge of the base. Each subsequent terrace is set back 2 metres (6.6 ft), leaving a narrow corridor at each stage. The top consists of three circular platforms, with each stage supporting a row of perforated *stupas*, arranged in concentric circles. There is one main dome at the center, the top of which is the highest point of the monument, 35 metres (115 ft) above ground level. Stairways at the center of each of the four sides give access to the top, with a number of arched gates overlooked by 32 lion statues. The gates are adorned with Kala's head carved on top of each and Makaras projecting from each side. This Kala-Makara motif is commonly found on the gates of Javanese temples. The main entrance is on the eastern side, the location of the first narrative reliefs. Stairways on the slopes of the hill also link the monument to the low-lying plain.

Features-Outer enclosure
uring the visit, which began at 4 am, I was able to witness the spectacle of the sunrise from the temple, where the bluish light of dawn slowly unveils the mountains surrounding the temple, while a thick fog that emanates from the Javanese jungle makes you feel like being in a not earthly place, closer to heaven.

BOROBUDUR, THE ARCHITECTURAL MANDALA.


In Buddhism, the mandala represents a landscape of the universe with Buddha in its center, and shows the different steps in the process of finding the truth. Borobudur was built on a hill, following the layout of a giant mandala, representing the Buddhist cosmology. It consists of nine platforms divided into three sections:
- The upper three are circular platforms, called ***Arupadhatu***, and have a slightly curved oval shape consisting of two minor axes aligned with the cardinal points and two major axes aligned with the intermediate directions.
- The six lower platforms are square, called ***Rupadhatu***,
- Moreover, in 1885 a structure in the base was discovered and it was called ***Kamadhatu***.

The lower platform probably also had a structural function to prevent the collapse of the structure. It was added after the temple was finished, as it can be seen in one of the corners, where the older reliefs have been exposed.

The architectural layout leads the visitor throughout a system of stairs in order to ascend to the platforms and reach the top of the structure, a clear representation of

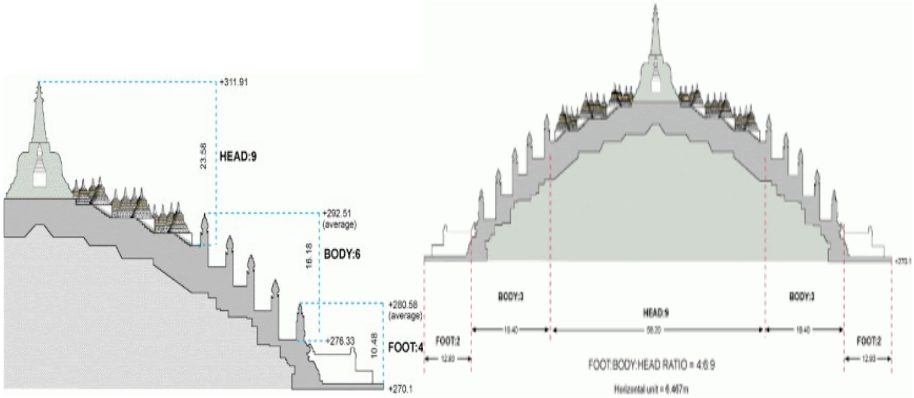
the journey towards a spiritual "enlightenment". The pilgrims walked each platform twice, in order to learn from the reliefs on each side.
Between the latest square platform and the first circular one there is an arch topped by an intimidating figure of a guardian. It is a reference to a transition to a more pure place, where evil spirits had no access.The bell-shaped stupas contain the figure of a Buddha. This is quite unusual, I have not seen it in other Asian countries, perhaps due to a syncretism between Buddhism and ancient Javanese traditions, where ancient ascetics used go to meditate in caves.

An interesting detail is that the openings of the stupas of the first two levels are in diamond shape, while those of the stupas of the upper platform are in square shape. (Note the different form of the pieces of stone). Perhaps this symbolized the path perfection, to the enlightenment that every pilgrim aspired by climbing and meditating through the different platforms.

The last great stupa, crowned by an octagonal pinnacle, has no opening and some people say that inside there used to be a golden Buddha, stolen by a Dutchman explorer, but this theory has not been proved. The simplicity of its form contrasts with the baroque richness of the reliefs that are located in the platforms below, and I imagine that has to do precisely with the austerity and simplicity that Buddha preached.

ASTROLOGICAL-COSMOLOGICAL-MATHEMATICAL RELATIONS IN BOROBUDUR

The structure can be divided into three main elements: the base, the central part and the top, which in analogy to the feet, body and head represent the three states of mental preparation: the Kamadhatu or world of desires,the Rupadhatu or world of forms and the Arupadhatu or formless world. A 1977 study by the professor found a ratio of 4:6:9 for the composition of both the three parts of the temple as well as each of the temple main parts. This ratio is equal to that found in the temples of Pawon and Mendut as well as the impressive complex of Angkor Wat in Cambodia.



Section of the temple according to Professor Atmadi.Image courtesy of Borobudur.t**v**

The researcher Mark Long, who has been studying the calendrical, astronomical and cosmological relations in Borobudur for several years, based on its own survey of the complex, proposed that the same ratio of 4:6:9 can be applied to the width of the whole monument.
North South Section, where according to Mark Long the same 4:6:9 ratio was used, such as in the height of the temple.
It is thought that the architect of Borobudur, named Gunadharma, believed that the plans of temples played a direct role in determining the fate of each occupant of the structure, so the architect's role should be to harmonize the forces of the microcosm that govern human life with the macrocosm that governs the life of the

gods. Gunadharma took the *tala* as a measurement unit, which is the distance between the thumb and little finger when they are stretched to their maximum separation, a system widely used in India. Because this measure varies little from person to person it is possible that the *tala* form an important person may have been employed as a method of standardization. Mark Long has found that the extent of the *tala* used in the monument was 22.9 cm.

Based on his own measurements, Long stated that the overall dimensions are based on a number of *talas* that symbolize important events in the Hindu calendar, specifically a calendar called Vatsu Purusha Mandala. In the faces and square corners of this diagram the solstices and equinoxes are represented. The arrangement of the stupas follows a well-studied geometric pattern, avoiding, for example, being placed in the main diagonals of the monument, where it was believed the important divine energies flow.

DECORATION:Borobudur aside of the symbolism in their mandalic architectural layout displays also many references to the life of Buddha, both in reliefs and statues.The reliefs have an educational role. The scenes represent the history of Buddha, his various incarnations and the path that the faithful should follow to reach Nirvana.

The Buddha statues, many of whom are maimed and some missing, are distributed differently in the square platforms than in the circular ones. In the five square platforms, called Rupadhatu, the Buddhas, numbering 432, are located in niches, placed in rows in art outer part of the balustrades. The number of Buddhas diminishes as platforms get higher. Thus, the first platform contains 104 niches, the second 104, the third 88, the fourth 72 and the fifth 64.

Details of Borobudur/ Extreme left pic Model top temple-Photo courtesy of Davey Sarge

The upper platforms or *Arupadhatu*, contain 72 small latticed stupas (which are mound-shaped structures, typical of early Buddhism) that surround a larger stupa more. Thus, in the first level there are 32 stupas, 24 in the second and 16 in the third level.

While at first glance the Buddhas seem to be the same. sitting lotus position, which is sitting on crossed legs. However, the different hand position represents various statesof meditation. http://architecturalmoleskine.blogspot.com/2010/02/borobudur-

MANDALA IS IT ?

Creation of a Mandala

Artists and monks can create mandalas in sculptural and architectural forms. They may also paint mandalas on a wall, cloth, or paper. For example, for ceremonies, monks often create mandalas in less permanent media, with colored powders or sands. They put a lot of effort into producing mandalas. Performing a series of rituals, they prepare the space and objects used to create a mandala. These rituals may take up to three days to complete. Then the makers create a mandala in their minds before they begin the physical creation of the mandala.

Construction of a Mandala

The construction of a mandala is a part of the ritual. It includes chanting *mantras* or words of power. The ritual serves for the empowerment of the mandala seen as an object of cosmic energy. When practitioners meditate with a mandala, they access the energy that the mandala embodies.

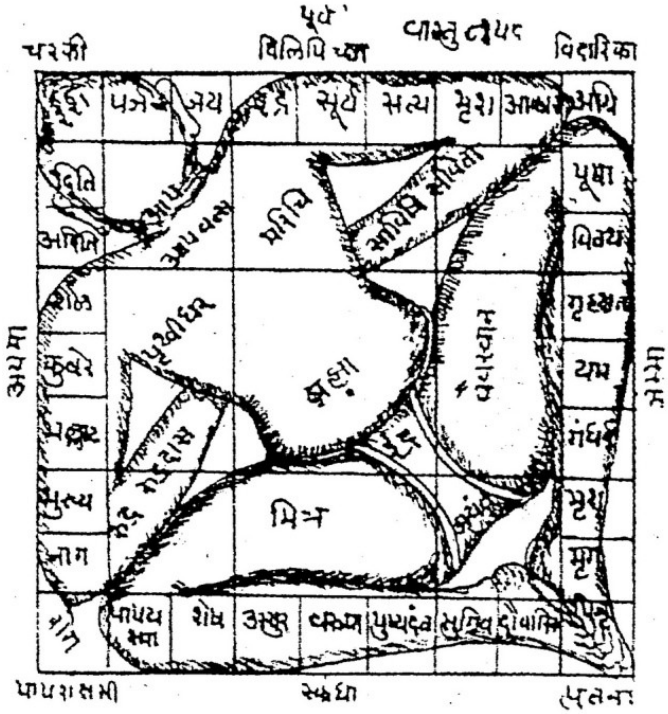
The actual construction of the mandala is the last phase of ritual preparation. First, monks snap the dry cord or wisdom thread. Next the deities and their consorts are invoked and dissolved into the string. The monks twist out the cord of five different colored threads that symbolize the wisdom-knowledge of each of the five Buddhas.

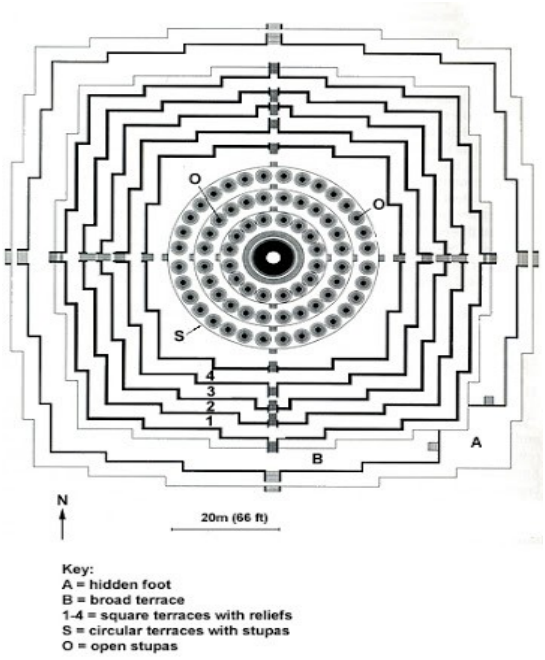
The Art of Mandala – Rituals

Today Buddhist lamas or priests draw Mandalas which are beautiful works of art. They also aid in the exploration of deep and divine concepts. Initiation rituals help to define the sacred space of a mandala. They come with a beautiful set of highly symbolic accessories. Before the mandala ritual takes place, practitioners use the tantric hand dagger to eliminate negative forces that may inhabit the space.

The *mandala* is a central entity in Hinduism and Buddhism and is the generic name for any plan or chart, which represents the cosmos (MICHEL, 1977). In Sanskrit *mandala* means 'circle and center' or 'Holy Circle' and points to its cyclic character. This circle is often embedded in a square, being a symbolic rendering of the surface of the earth (*Prithvi*). The earth is '*Caturbhsti'* or 'four cornered'.

The *Vaasta Purusha* mandala is a specific type of mandala used in Vaastu Shastra, representing a metaphysical plan of a building or temple in relation to the course of the heavenly bodies and supernatural forces. Purusha refers to the energy and power, which is generated by the understanding of this cosmic presence. The form is a square, subdivided in smaller squares. The number of subdivisions can vary and each type has a distinct name and is used in a specific context. The central area is called the *Brahma-sthana*, because Brahma or some other prominent deity concerned with the creation usually occupies it. The building (of a temple) takes place from a chosen grid, dedicated to a particular deity. Planetary divinities are arranged around the Bramasthana. The central place, being the most important part of the building, remains unbuilt.



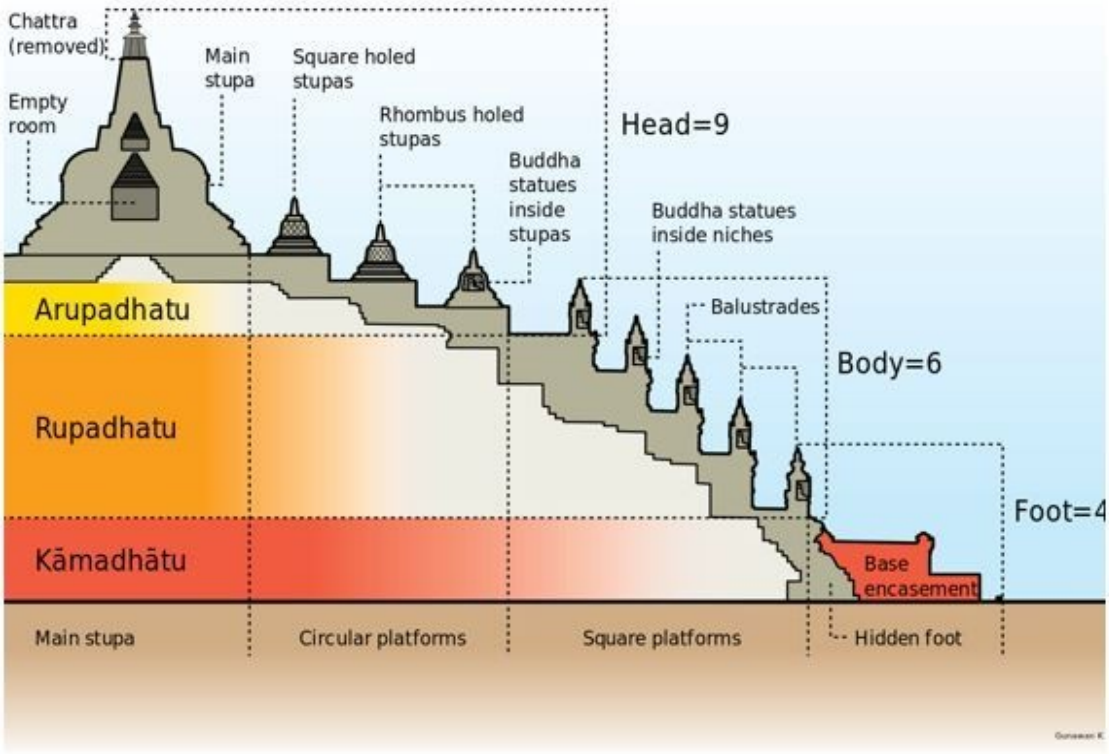


The cosmic man or *mahapurusha*, drawn on a temple *mandala* indicates the relation between parts of the body and the meaning of its position within the architectonic setting. The outlay of a temple is subject to the principle of *vimana*, meaning 'well-measured' or 'well-proportioned'. This picture is derived from an ancient manual of architecture. The main axis runs here from south-east to north west (head), but an orientation from south-west to north-east is also known.

The square and rectangular outlay: The '*Encyclopaedia of Indian Temple Architecture*' by Michael MEISTER (1988/1991) says that the Indian temple architecture, both in its northern and southern variety, are deeply inspired by a tetradic consciousness.

The square and rectangular outlay, if possible orientated along an east-west axis, with the entrance to the east, is the main characteristic. In front of the doorway is often a pillared hall, or *mandapa*. The attention to the four directions, either in the form of entrances or stairs, is prominent.

The layout of Borobudur is in fact a cosmological map of the Buddhist universe. Seen from above the shape of the pyramid is that of a traditional mandala whereby a square with four cardinal entry points gives way to a circular centre point. Moving from outside to inside one crosses three regions of Buddhist cosmology; *Kamadhatu* is the realm of desires, that of ordinary people; *Rupadhatu* is the realm of forms, where beings have controlled their earthly desires but are still bounded by physical form; *Arupadhatu* is the formless realm, of beings who have achieved sufficient merit to escape not just desires but even form and location.



Borobudur represents the Buddhist cosmos

As one climbs the temple of Borobudur one enters each of these realms. These first four levels around the temple represent the *Rupadhatu* realm, of beings who have controlled desire. Starting at the east facing entrance the carved stone reliefs depict mainly Jataka scenes, that is scenes from the Buddha's life, organised to instruct devotees as they proceed clockwise around each of the first four levels in turn.

East facing Buddha statues in the *Calling the Earth to Witness* posture
One of the lower Rupadhatu galleries of Borobudur
On the four *Rupadhatu* levels there are also 432 Buddha statues located in niches along each side of the temple . On the east facing terraces these statues are all in the *Calling the Earth to Witness* posture. Moving round to the south the statues are in the *Alms Giving* posture and then to the west they are in the *Concentration & Meditation* posture. On the north facing levels they are in the posture of *Courage, fearlessness*. Around the fifth uppermost balustrade of the *Rupadhatu* levels the Buddha images facing in all directions are in the *Reasoning & Virtue* posture.

On reaching the fifth level one moves into the *Arupadhatu* formless realm of nirvana, represented by the shift to a circular layout. This realm is perhaps the most famous aspect of Borobudur due to its iconic perforated stupas. A total of 72 of these stupas are arranged on three circular terraces around the main central stupa. On the first two *Arupadhatu* levels the stupas have rhombic perforations whereas on the third and highest level the openings are square. In each of the 72 stupas there is a Buddha statue in the posture of *Turning the Wheel of Dharma*.

The upper *Arupadhatu* levels of Borobudur representing nirvana

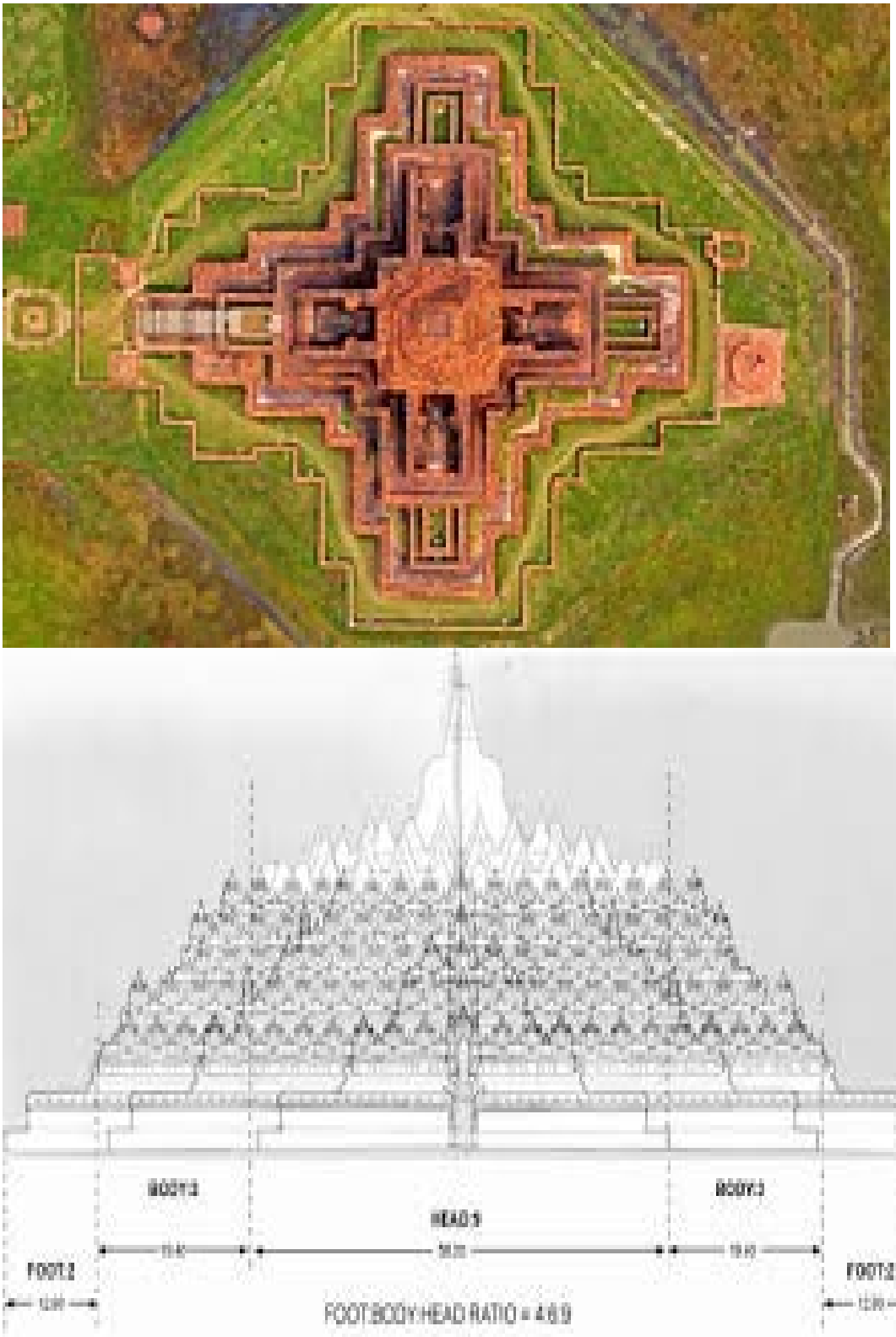
The central stupa represents the centre of the Buddhist universe. It looks rather truncated because it is missing its original *chattra*, a three-tiered stone parasol that would have topped the stupa. There is known to be an empty room at the centre of the stupa which would be expected to contain the most highly revered images and relics. It is not known when or how these were lost.

Archaeologists have discovered traces of coloured pigments and gold leaf on the reliefs and believe that rather than the drab volcanic stone we see today Borobudur was once covered in white plaster, painted in vivid colours and covered in gold. It would have been a truly awe inspiring sight 1000 years ago.

The Hidden Foot

One of the mysteries of Borobudur concerns the lowest level of the temple representing the *Kamadhatu* realm of desires. On an initial climb of the temple the first level appears to start in the second level realm of *Rupadhatu* with tales of the Buddha's life. In fact the lowest *Kamadhatu* realm is represented by a gallery of carved reliefs which are hidden under an encasement and are hence known as the "hidden foot". This Hidden Foot was only re-discovered during European led restoration activities in 1885. It is not known exactly why this lower level has been covered up. Some postulate that the encasement had to be add

Aerial view of the concentric circulatory



Paharpur stupa on Left as a Mandala and Borobudur on right also in cross section

R E F E R E N C E S

Connections, ed. Dorothy C. Wong and Gustav Heldt (Amherst: Cambria Press, 2014)

Borobudur’s Pāla forebear? A field note from Kesariya, Bihar, India,*swati chemburkar*

Across Space and Time: Architecture and the Politics of Modernity,By Patrick Haughey,google books
Though the assumption of the Borobudur as a *maṇḍala* seems possible, this view remains yet impossibleto prove. In spite of the previously mentioned similarities with the
*maṇḍala*s, there are, however, alsomany differences. Beside the five transcendental Buddhas many other deities – both male and female – are often seen depicted in
maṇḍas . However, neither of these deities can be found on the Borobudur.Instead we do find many other depicted Buddhas on the Borobudur, but these do not display any of thefeatures similar to other male or female deities. Thus, the other Buddhas do not function as a mere substitution for the various
deities. Therefore, we may assume, that, as already had been suggested, theBorobudur displays a variant of Buddhism in the way it manifested in Java at the time of the reign of Shailendra Dynesty but based on Indian influences and Mahāyāna Buddhism, which came to Java from China during the heydays of the Tang dynasty (618-906).The unique combination of these aspects would eventually become the Buddhism of Java.

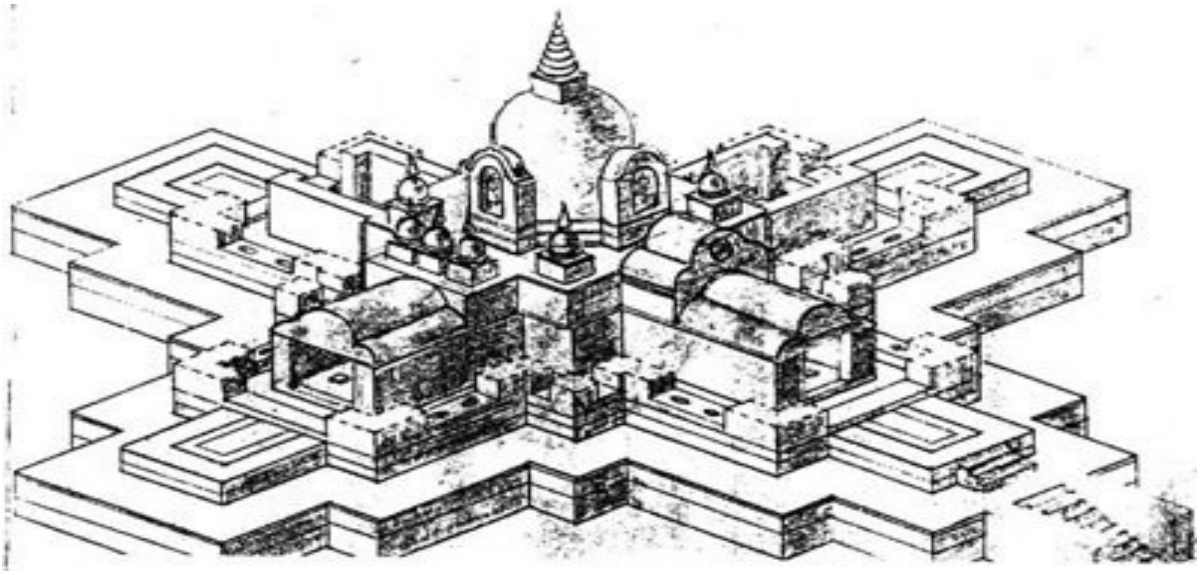
Then there also was the Hindu dynasty of Sanjaya that ruled on Java during the same period of the Sailendra dynasty. Thefact that the Sanjaya shared their power with the Sailendra dynasty – for example, through donations for the construction of the Kalasan temple – illustrates, that, apart from its religious function, the Borobudur also formed an important expression of power.

The origin of the mandala is not quite clear. However, the earliest concepts may have come from India and were initially mentioned in early Sanskrit texts. They described how the gods may have existed in their worlds. For example, Manjushri, the bodhisattva of wisdom, appears in this sculpture in his esoteric form, with three heads and six arms. The way he crosses his hands at the chest signifies supreme wisdom. Manjushri holds a bow and arrow, a sword, a lotus, and vajras or ritual weapons. Most prominent among the weapons is the sword, which cuts away ignorance.

Five stupas appear above the elaborate architectural setting. Within these stupas sit emanations of Manjushri. This sculpture represents a mandala because it conceptualizes the architectural plan of one of the great Buddhist monastic complexes or *mahavihara* of Bengal, probably in present-day Bangladesh.

Somapura Mahavihara

Somapura Mahavihara was one of the important centers of Buddhism. The complex is located in Paharpur, in northern Bangladesh. It was built by king Dharmapala (ca. 781–821) of the Pala dynasty (8th –12th centuries). The original tower in the center of the complex was believed to be about 32 meters (about 105 feet) high. Four large holes were placed around the tower towards the cardinal points. Consequently, the cross-shaped plan of this *mahavihara* could represent a part of the mandala.



Philosophy Behind the Mandala

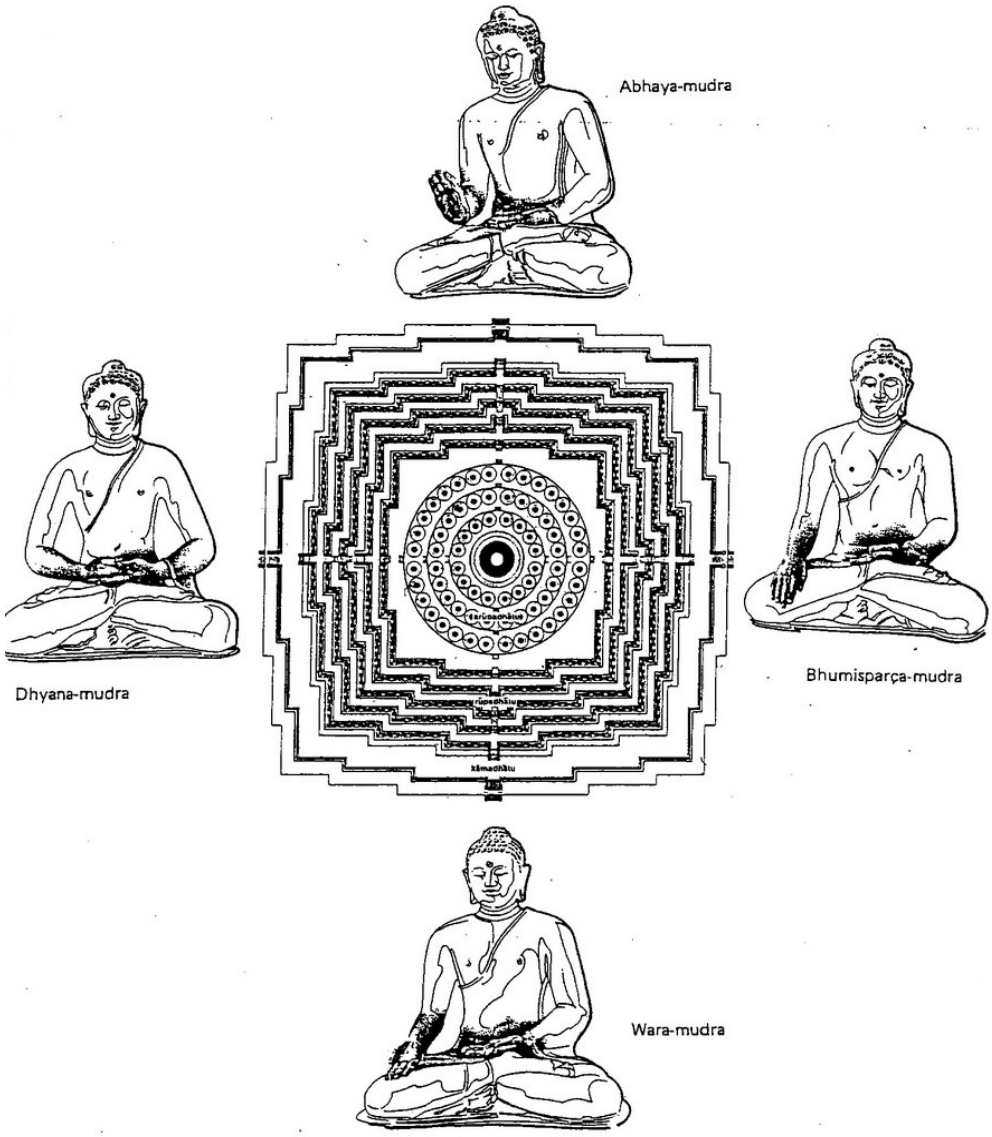
Five Tathagatas or Dhyani Buddhas

In places like Paharpur thinkers probably helped to develop the concept of the Five Tathagatas or Dhyani Buddhas. These deities are “self-born” celestial buddhas who have existed since the beginning of time. In contrast with historical figures like Gautama Buddha, they represent intangible forces and divine principles. These Buddhas usually include Vairocana, Akshobhya, Ratnasambhava, Amitabha, and Amoghasiddhi. Each of them has their own colors, symbols, and *mudras*. They also face different cardinal directions. As a result, monks found a new way to meditate on self-restraint.

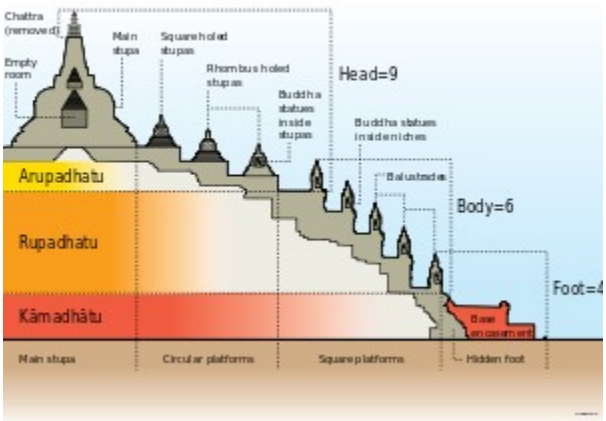
5 Dhyani-Buddha, in Mahayana Buddhism, and particularly in Vajrayana (Tantric) Buddhism, any of a group of five “self-born” celestial **buddhas** who have always existed from the beginning of time. The five are usually identified as Vairochana, Akshobhya, Ratnasambhava, Amitabha, and Amoghasiddhi.
As Takeo Kamiye puts it in *SOMAPURA MAHAVIHARA at PAHARPUR (BANGLADESH)*http://www.kamit.jp/17_world/28_paharpur/pah_eng.htm

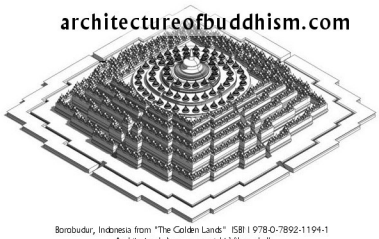
Here they were unified in the form of a great stupa surrounded by monk cells in a vast square shape. As a result, the temple form with a large geometric Mandala-type plan spreading to the four quarters, was established here and was then transmitted to Southeast Asia. It was furthermore scaled up from at the temples in Pagan, Myanmar, until the Borobudur, Indonesia, through the Angkor-Wat, Cambodia, under the influence of Paharpur. I have already written that this form was originated in Jaina temples, in Chapter 6 of “Jaina Architecture in India” on this website, “The Adinatha Temple at Ranakpur”.

- Dharmachakra mudra. Dharmachakra in Sanskrit means the 'Wheel of Dharma'. ...
- Bhumisparsha mudra. Literally Bhumisparsha translates into 'touching the earth'. ...
- Varada mudra. This mudra symbolizes charity, compassion and boon-granting. ...
- Dhyana mudra. ...
- Abhaya Mudra.


Abhaya-mudra
Dhyana-mudra
Bhumisparça-mudra
Wara-mudra

Borobudur Cross Section and Building Ratio
Borobudur, Central Java, Indonesia





Borobudur, Indonesia from "The Golden Lands" ISBN 978-0-7892-1194-1
Architectural diagram copyright Vikram Lall

Chapter 3

STUPA PERSPECTIVE -Discussion on some features

STUPA: VERTICAL FORM & SYMBOLISM

The form of the stupa follows from the sequence of the five elements. These are qualities of substance of which reality is made in various combinations. The ascend from the base/bottom up as earth, water, air fire and space. The last being all pervasive and holding the other four together. They are in essence states of energy or consciousness as well as states of density. Thus earth is solid, impervious, water is fluid, transparent, air is gaseous or vapor, fire is plasma, atoms free electrons, space is empty-still, formless. The space in each of the elements also increases as they proceed from earth to fire as does their molecular structure.

As stated before, each level along the path marks stations of enlightenment and are associated with specific deities, practices, visualizations and mantras to stimulate the development of wisdom and compassion and other Bodhisattva qualities and eliminate the ignorance and attachments that are the limitations to achieving enlightenment. The stupa embodies the whole Dharma and, as well, is a part of the Dharma as a holon is both whole and part of the hologram.

The vertical form of the stupa rises up out of the mandala as if extruded. The stupa is essentially a three-dimensional form of the mandala. (See Stupa Form and Symbology). Each level of the stupa represents an ascending staget of the Buddhist path to enlightenment and thus also the Path of Return through the levels of multi-dimensional reality. The Buddhist cosmology defines 31 planes of consciousness in the ascending structure. (See Mandala #11 & Stupa #12 models of MDR.)

VERTICAL FORM & SYMBOLISM

At the bottom are the first three steps, which give access to the plinth upon which the whole structure sits. These represent the three refuges of Buddha (the Teacher), Dharma (the Teachings) and Sangha (the Spiritual Community). The plinth or platform is surrounded by a wall, which defines the sacred precinct. The 3 steps are often framed by four gates for each of the four directions which serve to both protect the access to the stupa and

prepare the aspirant who applies for entry. The mandala plan is drawn out on this plinth.

The lowest level of the Chorten type stupa is the Lion Throne base which symbolizes the Buddha's mastery over the entire universe. The treasure vase placed within it often contains relics or spiritual objects which symbolize the eight noble riches. At the base of each of the major levels there is a band of lotus petals representing unlimited love, compassion, joy and equanimity; they are both the foundation and the expression of the universe, embodying the entire teaching.

Terraces

MODEL
Boudhanath Stupa, Kathmandu, Nepal

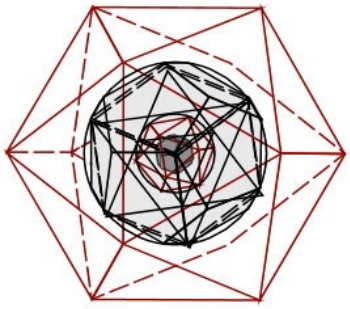
BOROBUDUR to RIGHT

The base of the domed stupa has a number of terraces for circumambulating the dome, These vary in number, usually three or four, symbolize the four "Immeasureables": love, joy, compassion and equinimity and the Four Noble truths regarding the causes and abatement of suffering. They also correspond the lower body or legs of the Buddha. Altogether they take the form of a shallow stepped pyramid. These are square in plan and represent the lessons of physical lifetimes to be experienced and mastered on the path to enlightenment. The terraces are circumambulated in a spiral path up to the base of the Dome. . The walls of the terraces along this part of the path may be decorated panels depicting various deities, teachings and events of the Buddha's life. The wall of each terrace is capped by a frieze representing the four outer rings of the mandala. They begin at the lowest with the rainbow, then the fire of purification that burns off imperfection and distortion, then the band of diamond vajras of the purified mind and finally the 64 lotus petals of protection.

The Steps and Balustrades that connect each level take the form of the cosmic serpent which both brings the Buddhas to earth and the ascending initiates to up enlightenment. The stairways symbolize both upward and downward flow of prana, the vital breaths or currents that flow in the ida and pingula that spiral around the sushsumna, central energy column of the body.

Dome/Bumpa

Sitting on the terraces is the “Bumpa” or dome which represents the Buddha’s torso or upper body. It typically was solid with surrounding niches or alcoves for icons or statutes. The shape of the dome corresponds to the cosmic egg, source of the universe, and is also called a garhba, meaning “womb” found in Indian temples. A hollowed Dome could serve as an inner space for meditation but also be a resonance chamber to amplify the energies produced and focalized by the dome shape. As a perfect hemisphere with a virtual full sphere that includes the terraces below it is then the whole universe in which the sacred solids: tetrahedron, cube, octahedron, icosahedron and dodecahedron appear as vibrational structures. These are analogs geometrically of the sphere which can be nested within each other…seed forms of the universe. The dome is designed with an outer, flattened dome having an radius that is in golden Ø ration to the inner dome.Inside the dome there would be a central mast called the “yupa”, which rises from either the base of the terraces or the base of the dome and rises to the top of the pinnacle. It is also called the sok shing, the world or life-tree or the Tree of Enlightenment, made from a living tree. This represents the axis mundi of the earth, the vertical Path to the Sun, which sits at the center of the universe. It also represents Buddha’s spinal column or sushumna and is marked at the five chakra points. Alternately there could be a standing quartz crystal to amplify and radiate the energies of the dome.



THE LESSER MAZE
Nested Sacred Platonic Solids

Harmika

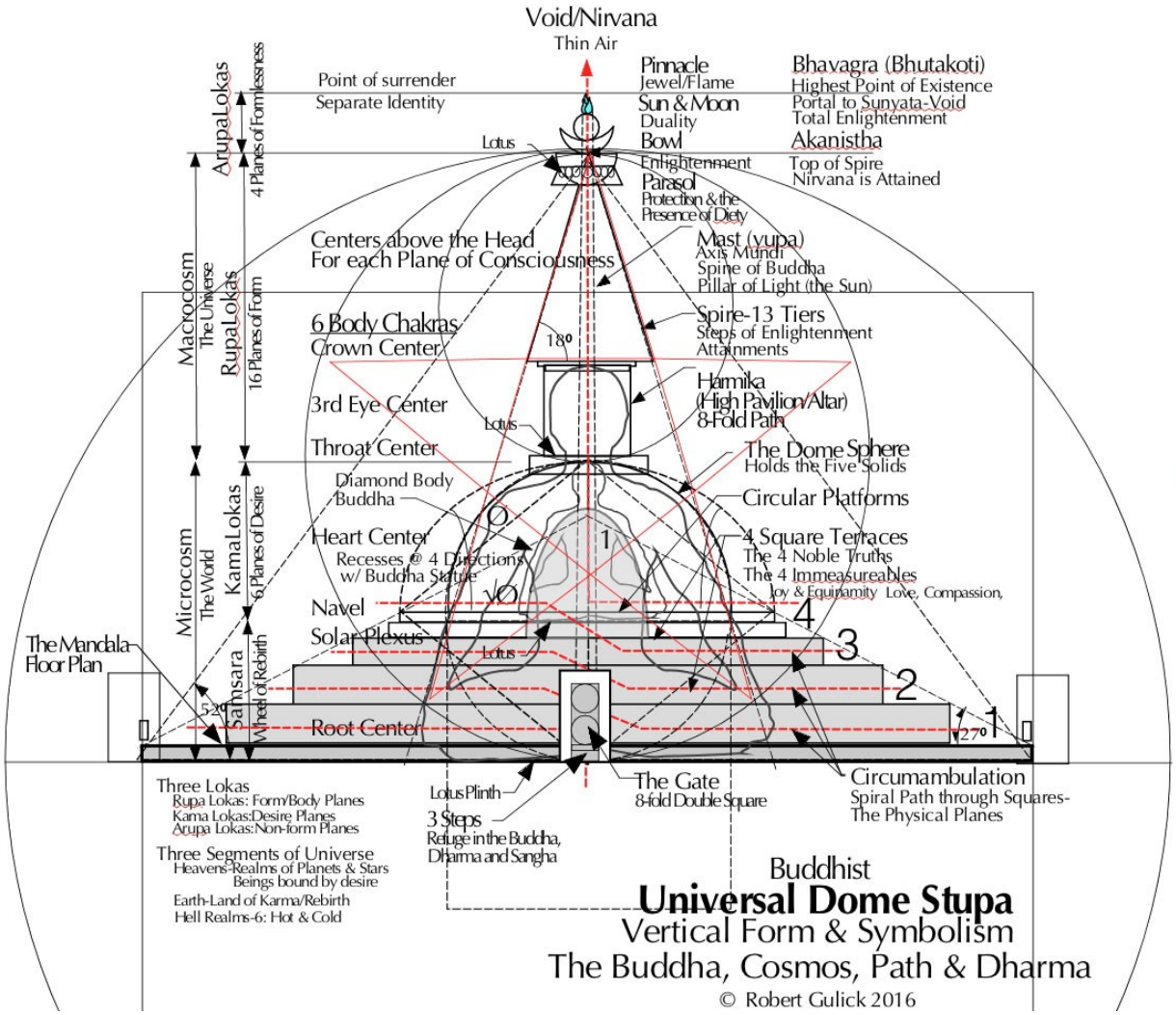
The “Harmika” or high altar, representing the Buddha’s head, sits on top of the dome and may have the Buddha’s all seeing eyes on its 4 faces. The harmika represents the ancient fenced area or separated sacred space having a square masonry fire altar at the base of a tree, representing the world and the whole body of teaching. Its form is a cube, which having 8 vertices symbolizes 8-fold path of right realization, speech, action, livelihood, effort mindfulness and meditation. Harmika repeats in a higher/smaller format the symbolism of the square steps and dome below it. The Harmika is accessed by a circular opening at the top of the Dome called the “Sun Door” which admits light into the universe-dome. The sun which sits eternally at the top of the stupa is the goal of the vertical path the portal to the center of the universe.

Spire

Above the harmika is a pyramidal or conical structure called the Spire that has thirteen ascending rings or disks representing the thirteen steps of enlightenment (or accomplishments of the Bodhisattvas). They can be thought of as the layered dimensions of heavens corresponding to ascending stages of consciousness. This form, like pyramids all over the world, channels subtle etheric energies into the earth.

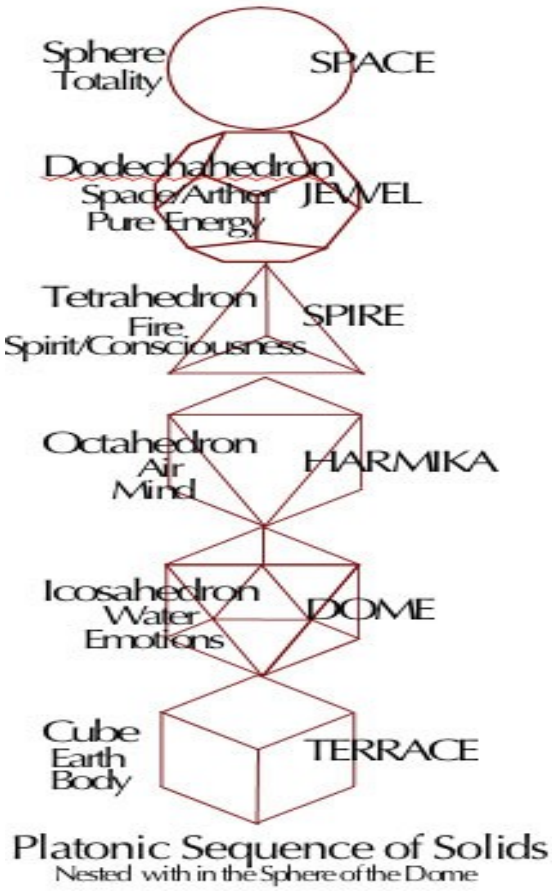
Pinnacle

The spire is crowned with a parasol attached as a skirt around a bowl, which provides protection for the stupa and indicates the presence and compassion of the Buddha. The bowl or vase holds the elixir of enlightenment, the nectar of immortality. The full bowl represents perfected enlightenment. The sun sitting in a crescent shaped moon sit on top of the bowl representing the non-dualized reality of wisdom (female principle), 1000 lights or Bodhichitta joined with compassion (male principle), thus undivided totality. Finally above this is a blue flame representing the achievement of ultimate enlightenment and Buddhahood. The entire assembly of the bowl. Sun/moon and flame is sometimes known as the “Jewel” or the Pinnacle. Above this, thin air, the void, emptiness beyond enlightenment, the last step requiring the surrender even of the teachings which brought one to enlightenment.

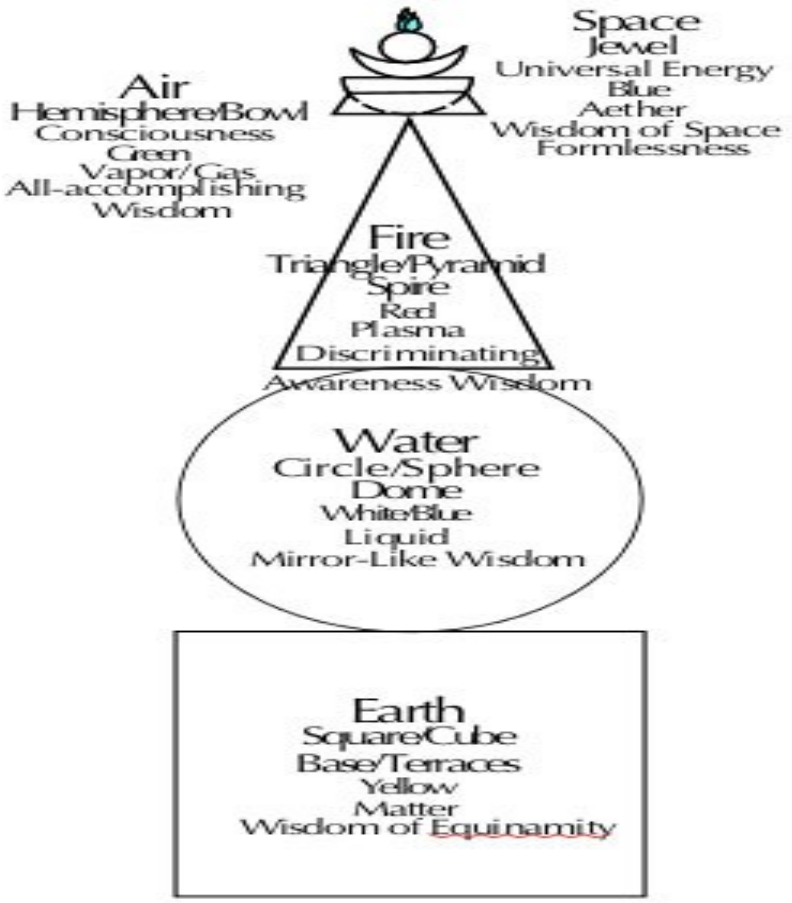

Void/Nirvana
Thin Air
Pinnacle
Jewel/Flame
Bhavagra (Bhutakoti)
Highest Point of Existence
Portal to Sunyata-Void
Total Enlightenment
Point of surrender
Separate Identity
Sun & Moon
Duality
Lotus
Bowl
Enlightenment
Akanistha
Top of Spire
Nirvana is Attained
Parasol
Protection & the
Presence of Diety
ArupaLokas
4 Planes of Formlessness
Centers above the Head
For each Plane of Consciousness
Mast (yupa)
Axis Mundi
Spine of Buddha
Pillar of Light (the Sun)
Macrocosm
The Universe
RupaLokas
16 Planes of Form
6 Body Chakras
Crown Center
18°
Spire-13 Tiers
Steps of Enlightenment
Attainments
3rd Eye Center
Lotus
Harmika
(High Pavilion/Altar)
8-Fold Path
Throat Center
The Dome Sphere
Holds the Five Solids
Diamond Body
Buddha
Circular Platforms
Heart Center
Recesses @ 4 Directions
w/ Buddha Statue
4 Square Terraces
The 4 Noble Truths
The 4 Immeasureables
Joy & Equinamity Love, Compassion,
Navel
Solar Plexus
Microcosm
The World
KamaLokas
6 Planes of Desire
The Mandala
Floor Plan
Lotus
Samsara
Wheel of Rebirth
Root Center
27°
Three Lokas
Rupa Lokas: Form/Body Planes
Kama Lokas:Desire Planes
Arupa Lokas:Non-form Planes
Three Segments of Universe
Heavens-Realms of Planets & Stars
Beings bound by desire
Earth-Land of Karma/Rebirth
Hell Realms-6: Hot & Cold
Lotus Plinth
3 Steps
Refuge in the Buddha,
Dharma and Sangha
The Gate
8-fold Double Square
Circumambulation
Spiral Path through Squares-
The Physical Planes
Buddhist
Universal Dome Stupa
Vertical Form & Symbolism
The Buddha, Cosmos, Path & Dharma
© Robert Gulick 2016

Boudhanath Stupa, Kathmandu, Nepal

Elements



Platonic Sequence of Solids
Nested with in the Sphere of the Dome



The Elements

Stupa by the Numbers

0-Void/Nirvana

1-Jewel/Flame
Singularity/The One

2-Sun & Moon-Duality

3-Spire-Form/Manifestation
Pyramid/Energy

4-Harmika
Volume/Body

5-Dome-Life/Perfected Being
Sphere of Being-Platonic Solids

6-Terraces- The World
Stage of Life/Experience

7-Spiral Path-Growth
Evolution

8-The Gate-Experience-the Path
To Nirvana/Enlightenment

9-Nirvana
Heaven

The stupas on terrace at Sanchi lie in one of the three well defined areas; the others being the Eastern Area and the Southern Area, all lying within an eleventh-twelfth century AD stone circuit-wall. The monuments of Sanchi, thus, may be divided into two groups, one comprising those situated on the hill-top and the other, the isolated ones on the Western Slope of the hill. The plateau on the top of the hill is oblong in shape and measures about 384 metres from north to south and 201 metres from east to west.

Stupas on Terrace

The gateway leading to the stupas to the terrace is slightly over 5 metres high. Its decoration and constituents are similar in subject and style to those of the gateways of Stupa 1, though the workmanship is definitely inferior. With the exception of the scene carved on the front side of the lowest architrave, which has been interpreted as the paradise of Indra (Nandana-vana), where Lord Indra is seated at the centre on a throne under a pavilion surrounded by attendants, the reliefs have their analogues on the gateways of Stupa 1.

The importance of this stupa lies in the fact that the relics of Sariputta and Maudgalyayana, the two foremost disciples of the Gautama Buddha, were found enshrined at the centre of its dome on the level of the terrace. Inside the relic-chamber, which was covered by a large stone slab of over 1.5 metres, were two stone boxes with their lids respectively inscribed with the words Sariputta and Maha-Mogalanasa.

Sariputta's box contained a white steatite relic-casket, covered by a thin earthen saucer of lustrous blackware, along with two pieces of sandalwood.

Inside the casket were found a small fragment of bone and seven beads, variously of pearl, garnet, lapis lazuli, crystal and amethyst. On the inner surface of the lid was written in ink the letter sa, the initial of Sariputtam. In Maudgalyayana's box was found another casket, somewhat smaller, containing two small fragments of bone. The lid was initialled in ink with the letter ma.

Besides these two conspicuous stupas, there are the remains of a large number of other stupas on the main terrace around the north-east, south-east and south-west quadrants of the Great Stupa.

They are either monolithic or structural. The former, often with the relief of a Buddhist divinity, are portable. None of the masonry stupas, however, is intact, and most survive only up to their plinth.

Behind Stupa 3 is Stupa 4, ascribable to the second century BC, which exists only in a heap of loose stones without the trace of any ground balustrade. A coping stone, relieved with an undulating stem containing within its foils lotuses, buds, leaves and birds, was found near the stupa; it might have formed part of the balustrade around the harmika. Stupa 5, to the south of Stupa 3, is remarkable in its having an image of the Buddha in the dhyana mudra on a moulded pedestal built against its southern side. The stupa is built on a circular plinth with narrow courses of masonry and with footings; it is ascribable to about the sixth century AD. The two small stupas, 28 and 29, are to the east of Stupa 5. Both have high square bases with cornices and footings characteristic of the early Gupta age. Stupa 29 presents interesting features, not only in its having a core of large-sized bricks, but also in its having contained, within a small relic-chamber, a bone-relic along with the fragment of a highly-polished vase of the Maurya or Sunga age, placed in a cup of coarse ware with a second cup serving as the lid.

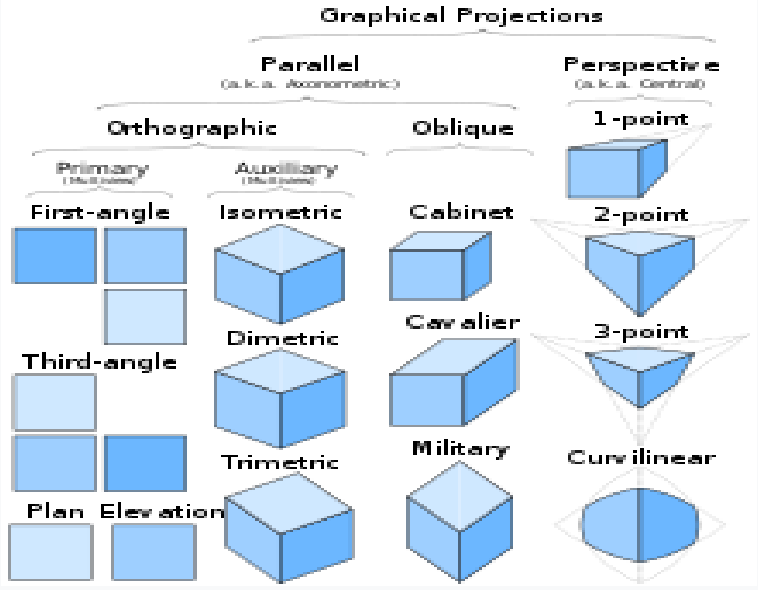
The size of the bricks and the presence of the early vase suggest that the relic was transferred here after the original stupa, which might have been of the Maurya period, had fallen to decay. The group constituted by Stupas 12, 13, 14 and 16, about 61 metres south of Stupa 5, is characterised by square plinths strengthened by footings; it belongs to the sixth-seventh century AD. The stupas are built of rubble and earth, faced with well-dressed courses of stone.

Some of them contain relic-chambers. In the fallen debris of Stupa 12, the relic-chamber of which had been completely destroyed before its excavation, was found the foot and pedestal fragment of an inscribed image of Maitreya. Another image, that of the Buddha in the dhyana-mudra, made of Mathura sandstone and belonging to the early Gupta period, was found against the western wall of the relic-chamber of Stupa 14.

Immediately to the south of this group is Stupa 6. Its core is built of heavy blocks of stone interspersed with chippings as in Stupas 3 and 4, with which Stupa 6 was contemporaneous. The existing facing both the superstructure and the plinth, the latter square on plan and provided with footings characteristic of the early medieva1 stupas of this site, dates from the seventh or eighth century AD. Stupa 7, about 30 metres to the south-west of the West Gate of Stupa 1, has the same structural features as Stupas 12, 13, 14 and 16. It rises to a height of 2.13 metres and is surrounded by the remains of a terrace, probably of a later date.
https://www.indianetzone.com/61/stupas_on_terrace.htm

Axonometric projection

Axonometric projection is a type of orthographic projection used for creating a pictorial drawing of an object, where the object is rotated around one or more of its axes to reveal multiple sides.



Classification of axonometric projection and some 3D projections

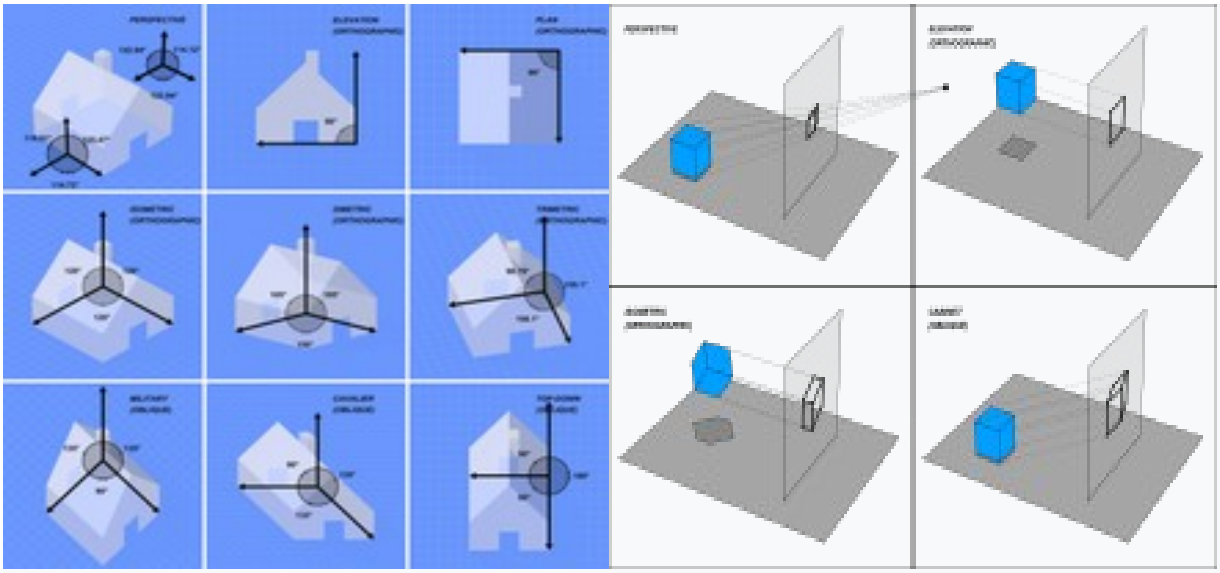
"Axonometry" means "to measure along the axes". In German literature, axonometry is based on Pohlke's theorem, such that the scope of axonometric projection could encompass *every* type of parallel projection,

including not only orthographic projection (and multiview projection), but also oblique projection. However, outside of German literature, the term "axonometric" is sometimes used only to distinguish between orthographic views where the principal axes of an object are *not* orthogonal to the projection plane, and orthographic views in which the principal axes of the object *are* orthogonal to the projection plane. (In multiview projection these would be called *auxiliary views* and *primary views*, respectively.) Confusingly, the term "orthographic projection" is also sometimes reserved only for the primary views.

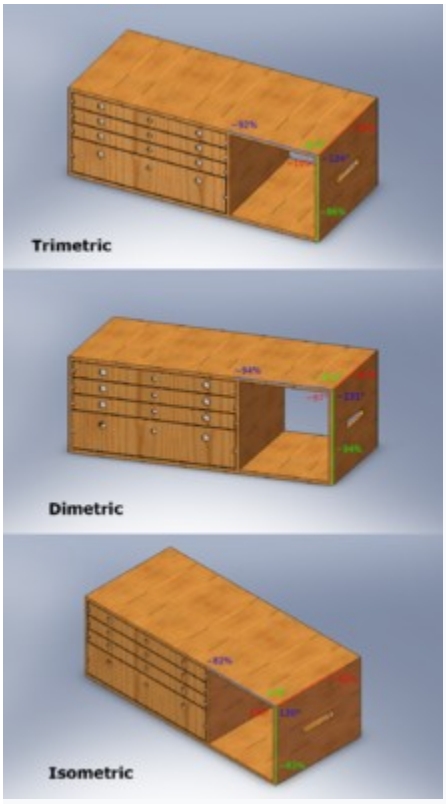
Thus, in German literature, "axonometric projection" might be considered synonymous with "parallel projection", overall; but in English literature, an "axonometric projection" might be considered synonymous with an "auxiliary view" (versus a "primary view") in an "multiview orthographic projection".

With an axonometric projection, the scale of an object does not depend on its location (i.e., an object in the "foreground" has the same scale as an object in the "background"); consequently, such pictures look distorted, as human vision and photography use perspective projection, in which the perceived scale of an object depends on its distance and location from the viewer. This distortion, the direct result of a presence or absence of foreshortening, is especially evident if the object is mostly composed of rectangular features. Despite this limitation, axonometric projection can be useful for purposes of illustration, especially because it allows for simultaneously relaying precise measurements.

3 TYPES:



Comparison of several types of graphical projectionRIGHT Various projections and how they are produced



The three axonometric views. The percentages show the amount of foreshortening.

The three types of axonometric projection are *isometric projection*, *dimetric projection*, and *trimetric projection*, depending on the exact angle at which the view deviates from the orthogonal. Typically in axonometric drawing, as in other types of pictorials, one axis of space is shown to be vertical.

In **isometric projection**, the most commonly used form of axonometric projection in engineering drawing, the direction of viewing is such that the three axes of space appear equally foreshortened, and there is a common angle of 120° between them. As the distortion caused by foreshortening is uniform, the proportionality between lengths is preserved, and the axes share a common scale; this eases one's ability to take measurements directly from the drawing. Another advantage is that 120° angles are easily constructed using only a compass and straightedge.

In **dimetric projection**, the direction of viewing is such that two of the three axes of space appear equally foreshortened, of which the attendant scale and angles of presentation are determined according to the angle of viewing; the scale of the third direction is determined separately. Dimensional approximations are common in dimetric drawings.

In **trimetric projection**, the direction of viewing is such that all of the three axes of space appear unequally foreshortened. The scale along each of the three axes and the angles among them are determined separately as

dictated by the angle of viewing. Dimensional approximations in trimetric drawings are common, and trimetric perspective is seldom used in technical drawings.

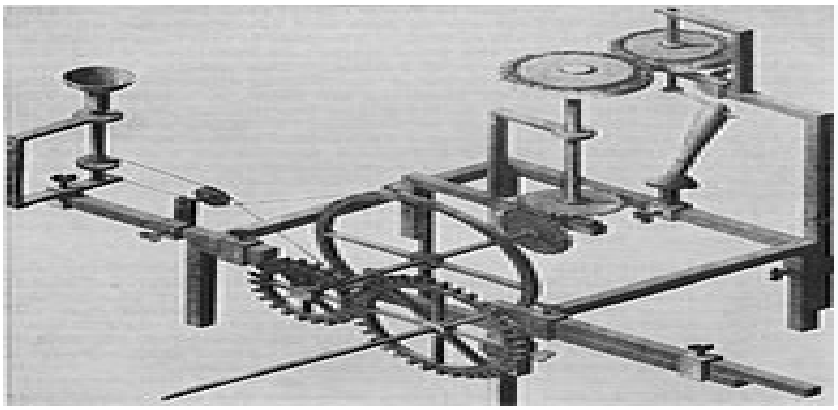
HISTORY: Axonometry originated in China. Its function in Chinese art was unlike the linear perspective in European art since its perspective was not objective, or looking from the outside. Instead, its patterns used parallel projections within the painting that allowed the viewer to consider both the space and the ongoing progression of time in one scroll.[6] According to science author and Medium journalist Jan Krikke, axonometry, and the pictorial grammar that goes with it, had taken on a new significance with the introduction of visual computing and engineering drawing.

The concept of isometry had existed in a rough empirical form for centuries, well before Professor William Farish (1759–1837) of Cambridge University was the first to provide detailed rules for isometric drawing.

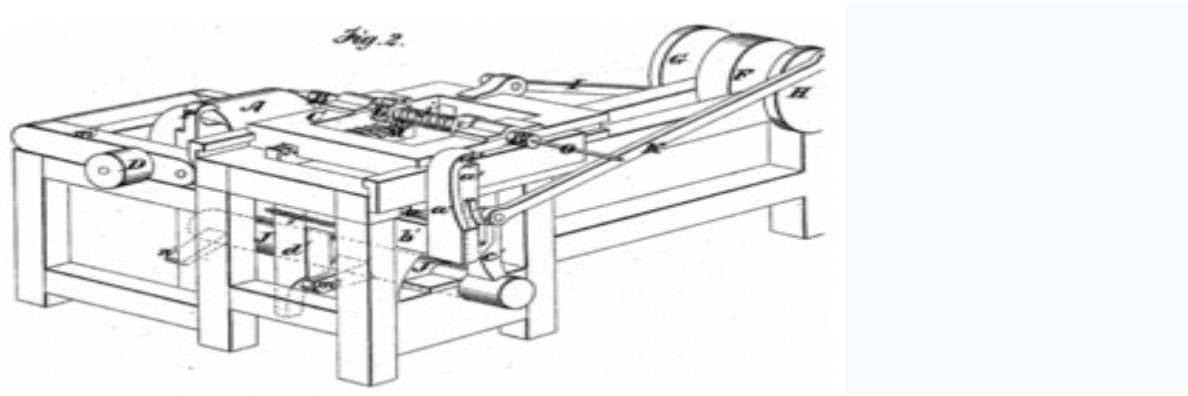
Farish published his ideas in the 1822 paper "On Isometric Perspective", in which he recognized the "need for accurate technical working drawings free of optical distortion. This would lead him to formulate isometry. Isometry means "equal measures" because the same scale is used for height, width, and depth"

From the middle of the 19th century, according to Jan Krikke (2006) isometry became an "invaluable tool for engineers, and soon thereafter axonometry and isometry were incorporated in the curriculum of architectural training courses in Europe and the U.S. The popular acceptance of axonometry came in the 1920s, when modernist architects from the Bauhaus and De Stijl embraced it".De Stijl architects like Theo van Doesburg used axonometry for their architectural designs, which caused a sensation when exhibited in Paris in 1923".

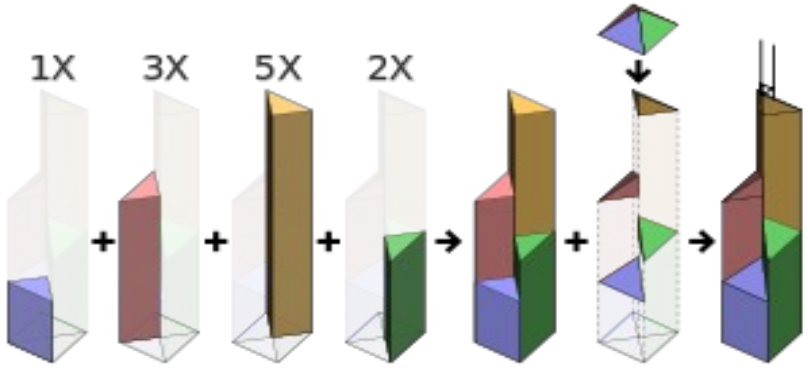
Since the 1920s axonometry, or parallel perspective, has provided an important graphic technique for artists, architects, and engineers. Like linear perspective, axonometry helps depict three-dimensional space on a two-dimensional picture plane. It usually comes as a standard feature of CAD systems and other visual computing tools



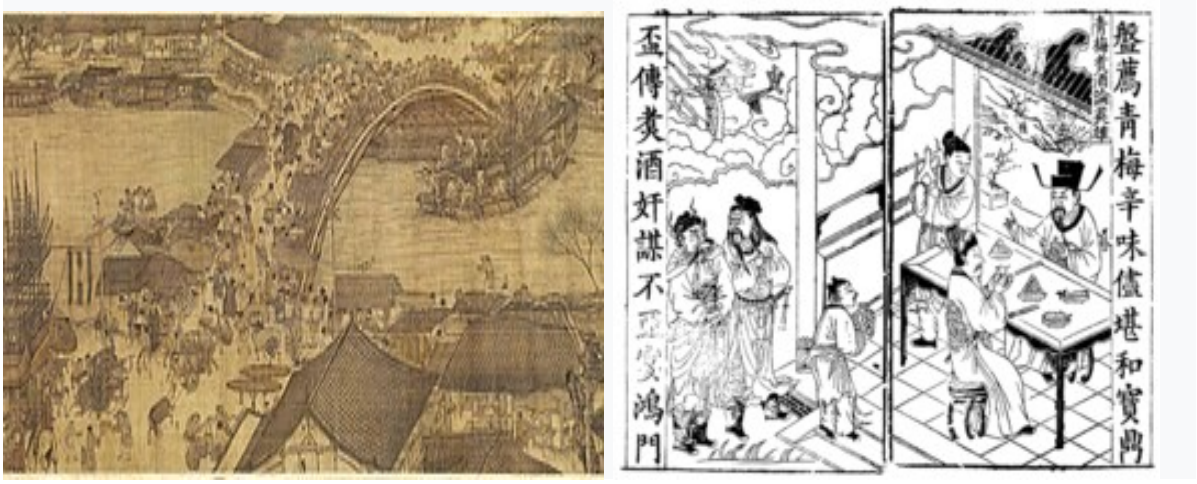
Optical-grinding engine model (1822), drawn in 30° isometric perspective



Example of a dimetric perspective drawing from a US Patent (1874)

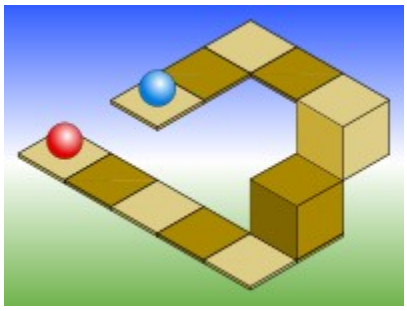


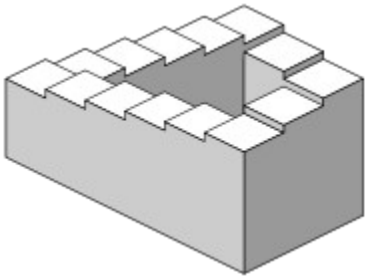
Example of a trimetric projection showing the shape of the Bank of China Tower in Hong Kong.



Detail of the original version of *Along the River During the Qingming Festival* attributed to Zhang Zeduan (1085–1145). Note that the picture switches back and forth between axonometric and perspective projection in different parts of the image, and is thus inconsistent.RIGHT Example of isometric projection in Chinese art in an illustrated edition of the *Romance of the Three Kingdoms*, China, c. 15th century CE.

LIMITATIONS:





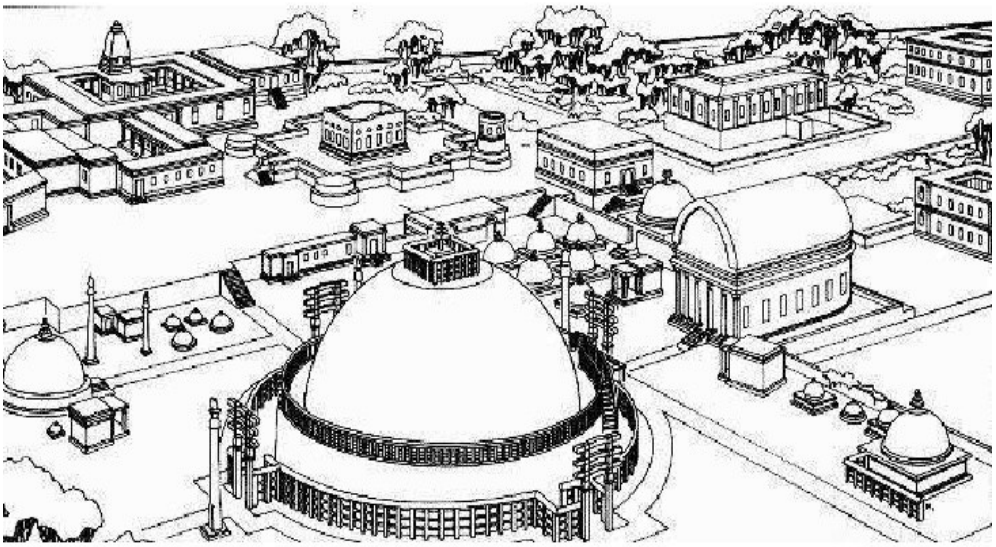
In this drawing, the blue sphere is two units higher than the red one. However, this difference in elevation is not apparent if one covers the right half of the picture.RIGHT The Penrose stairs depicts a staircase which seems to ascend (anticlockwise) or descend (clockwise) yet forms a continuous loop.

As with other types of parallel projection, objects drawn with axonometric projection do not appear larger or smaller as they lie closer to or farther away from the viewer. While advantageous for architectural drawings, where measurements must be taken directly from the image, the result is a perceived distortion, since unlike perspective projection, this is not how human vision or photography normally works. It also can easily result in situations where depth and altitude are difficult to gauge, as is shown in the illustration to the right.

This visual ambiguity has been exploited in op art, as well as "impossible object" drawings. Though not strictly axonometric, M. C. Escher's *Waterfall* (1961) is a well-known image, in which a channel of water seems to travel unaided along a downward path, only to then paradoxically fall once again as it returns to its source. The water thus appears to disobey the law of conservation of energy.

Cappella brancacci, Guarigione dello storpio e resurrezione di Tabita (restaurato), Masolino

In isometric **projection**, the most commonly used form of **axonometric projection** in engineering **drawing**, the direction of **viewing** is such that the three axes of space appear equally foreshortened, and there is a common **angle** of 120° between them. ... Dimensional approximations are common in dimetric drawings.



Axonometric drawing

Minimum and optimum areas for mono functions. to get a grip of the functional and spatial aspects of the space, eg. - a classroom (mono functional) and a staircase (static/transitional), pavilions & open/ enclosed spaces (multi-functional). User’s data, movement and circulation diagrams.

Method of learning: Observation & Study Drawings of the human body in various postures with required measurements. Drawing exercise of artefacts, eg. - a table (object) with the human body - contextual. • Measured drawing exercise of spaces – 4. Introduction to Design process – • Understanding the relationship between idea, context, space (form & structure), and functional requirements. • Introduction to the various methods of idea / concept generation - use of form, patterns in nature and in geometry, music, text, and other allied fields. • Space planning based on activity, which will involve the entire body, and its movement in space. Method of learning: Observation & Study • Understanding the difference and similarity while design of a non-enclosed space, a semi-enclosed space, an enclosed space. • Study of patterns and use the pattern, both physical and material patterns as well as patterns of transformation and Integration. Appreciation of the difference between architecture and the chosen pattern. • Design of functional furniture layout with requisite circulation, lighting and ventilation for a specific function. • Design of Spaces such as pavilion, gazebo, kiosk, bus stop, stage, living/dining, bedrooms, Architect's office, Doctor's clinic etc,. • Submission will include Idea generation, Study models, Sketches and drawings to achieve the desired results.

TETRADIC (4 SIDED) settings of Buddhist and Eastern Religious Architecture

The architecture of places of worship in Asia is an expression of the way of thinking in much the same way as elsewhere in the world. However, to cover the whole field of religion and architecture – even if it is narrowed down to the four-fold – is a Herculean task, which cannot be performed in a single chapter of a book. Both entities (Eastern religion and architecture) are so diverse and varied that even a brief survey would do no justice to the immense field of various beliefs and the material expressions thereof in architecture.

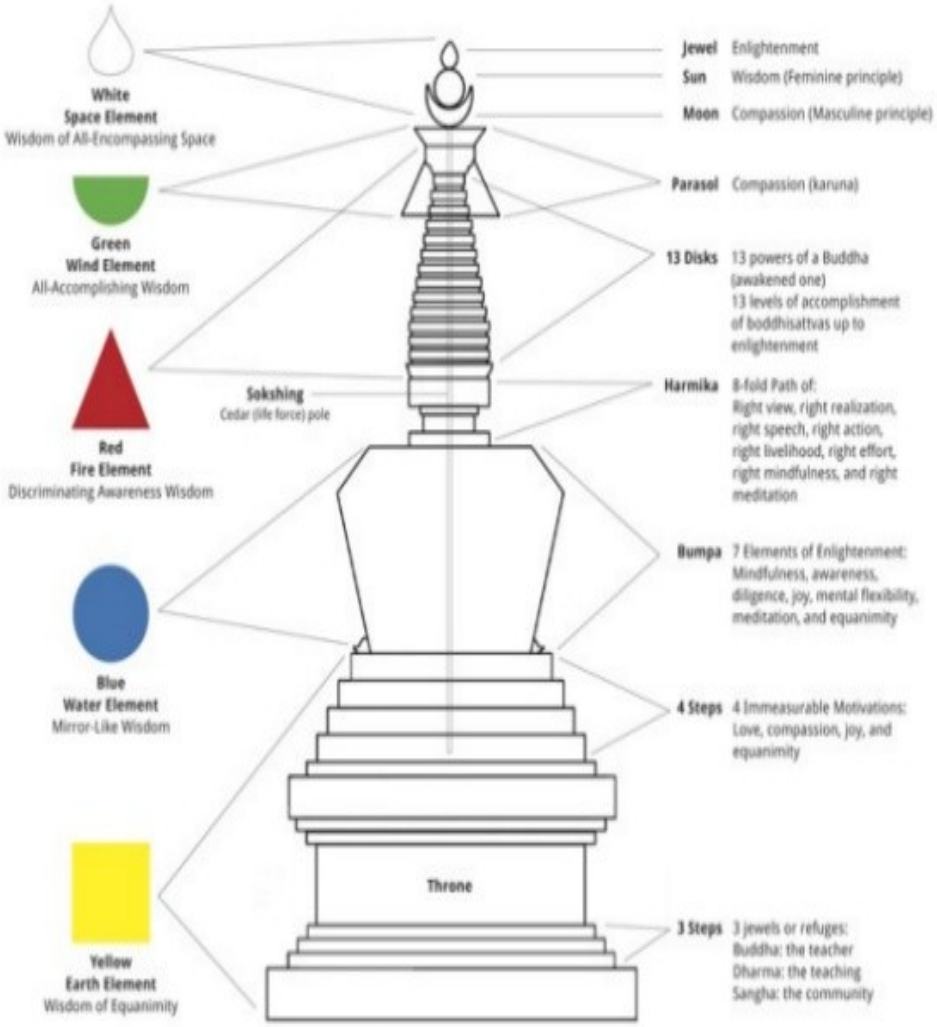
The easiest solution to scale this mountain of relevant information would be to abandon the operation right from the very start and leave the chapter on 'eastern' tetradic architecture completely out of this book. Some promise could be made to cover the subject another time in a separate book. However, to leave such an important contribution to the field of investigation out of the present survey would be unacceptable too. So a compromise had to be made and only some of the most outstanding examples of tetradic (temple) architecture in Asia are singled out for a short review, without a deeper quest for their religious and/or philosophical background and with no intention to be exhaustive.

A temple might be built for the primary purpose of worship, but it also demands a wider reading in relation to its material presence. It can function as object of devotion, as a mean to construct a personal reality, as a proof of

power, and – last but not least – it can point to the state of mind of the architects, who designed the building in line with its spiritual purpose. This latter, psychological reading is of particular interest in the present investigation. It is well known that the building of sanctuaries was inspired by the symbolism of the religion, but also provided the visible enhancement of that symbolism in a practical way.

The Hindu world view is based on a cycle of creation to destruction, which is divided into four ages (*yugas*). According to the Indian view, the universe is destroyed by fire and subsequently dissolved into a cosmic ocean out of which a new universe is created and another era begins (MICHEL, 1977). Man's position in this cycle is like a spell or illusion (*maya*), which should be broken (in a release or *moksha*) to understand the reality behind it. Geometric considerations occupy an important place in Hindu thoughts. Number is seen as a mean to express the relation between man and the universe. Indian temple architecture as a whole is greatly inspired by

proportional measurements and dimensions.

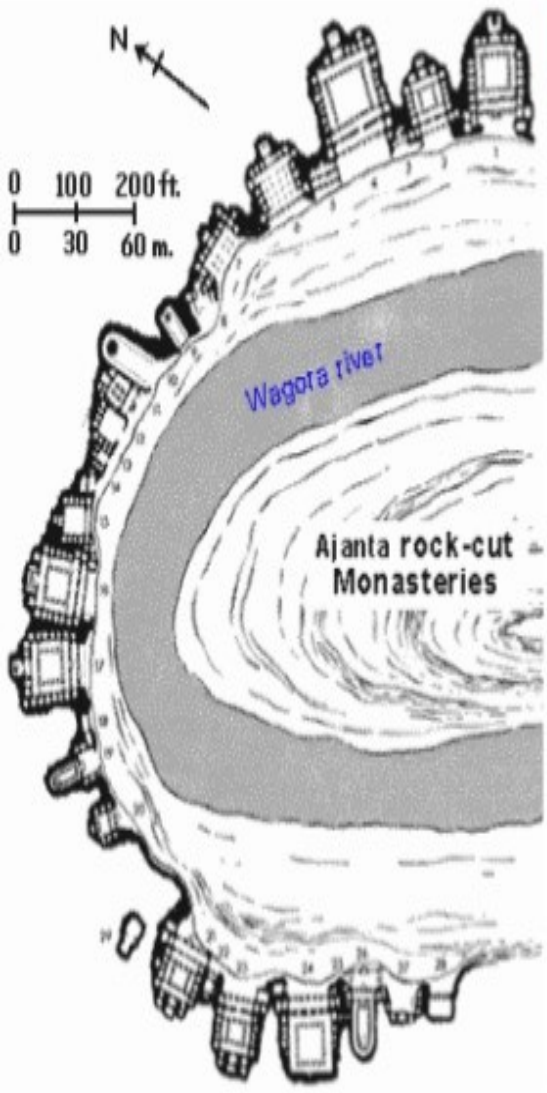


Stupa Symbolism

HINAYANA / EARLY PHASE -2nd c BC - 2nd c. AD

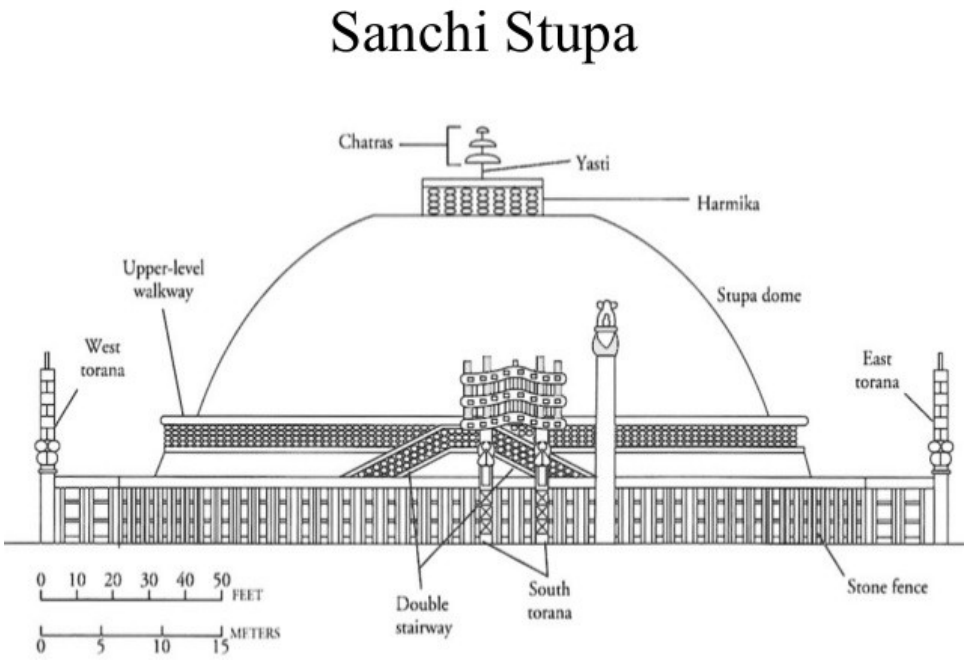
Evolution of the Chaityas and the Viharas

Earlier the huts of the monks were grouped around an open space to form the first monasteries



Evolution of the Vihara:

- An arrangement of a series of cells enclosing the 3 sides of an open courtyard
- The other side is left open for the entrance
- Spatial planning:
  - rooms normally opened onto an interior quadrangle with the backs forming an outside wall
  - This maintained the privacy and security
  - An inside verandah was added along the perimeter of the square for the monks
  - A number of viharas are attached to a chaitya hallresembling cloisters in the abbey church of the west
  - Built mainly of wood and other perishable materials
  - Evidence from bas reliefs
  - Frequently a 2 storeyed structure, barrel vault, horse shoe gable ends, light admitted through dormer windows
  - Outer façade containing an entrance with woodwork, including a pillared portico supporting a balcony- view processions and ceremonie
  - Modest structures of utilitarian character changing



The holy Mount Meru stands in the center of the universe and is the axis of the world (fig. 127). The sanctuary as a whole is called a *vimana*, which means 'well-measured' or 'well-proportioned'. The pyramidal or tapering roof above the *vimana* is called the *shikhara* and is a representation of Mount Meru. The *Brihatsamhita* was an early treatise on astrology, which also included a chapter on temple building. Time is of essence and the cardinal points have a symbolic meaning, with a major orientation along an east-west axis. The mountain Kailash (6714 meters) in western Tibet is regarded by many believers as the representation of Mount Meru on earth and as the central axis of a spiritual universe.

Vaastu Shastra deals with the knowledge and principles of the physical environment. It exerts an all-embracing influence on the traditional Hindu architecture. This knowledge was written down in three major texts. The *Viswakarma vaastushastra* has a North Indian origin. The *Manasara Silpa Shastra* and the *Mayamatam* are derived from Southern India. The latter (Dravidian) text concluded that 'if the measurements of the temple are in every way perfect, there will be perfection in the universe as well.'

Chapter 4

More of the Structure and Perspective of Borobudur

At the *Connections National Workshop on High-rise and Tall Buildings*, University of Hyderabad, Hyderabad, India, May 2009, Keynote Lecture. , P. Jayachandran, Ph.D, M.ASCE., Worcester Polytechnic Institute, Worcester, Massachusetts, 01609, USA noted the following requisites for Design of Tall Buildings Preliminary Design and Optimization .

1. The design of tall buildings essentially involves a conceptual design, approximate analysis, preliminary design and optimization, to safely carry gravity and lateral loads.
2. The design criteria are, strength, serviceability, stability and human comfort.
3. The strength is satisfied by limit stresses, while serviceability is satisfied by drift limits in the range of H/500 to H/1000. Stability is satisfied by sufficient factor of safety against buckling and P-Delta effects.
4. The factor of safety is around 1.67 to 1.92.

Subsystems and Components The subsystems or components of the tall building structural systems are essentially the following.

- Floor systems
- Vertical Load Resisting Systems
- Lateral Load Resisting Systems Energy Dissipation Systems and Damping

- Moment Resisting Frames
- Shear Wall-Frame Systems
- Shear Truss-Outrigger Braced Systems
- Framed-Tubes
- Tube-in-Tube Systems with interior columns
- Bundled Tubes
- Truss Tubes without interior columns
- Modular Tubes The structural system should be able to carry different types of loads, such as gravity, lateral, temperature, blast and impact loads. The drift of the tower should be kept within limits, such as H/500.

Technicalities apart, if the technology and corresponding knowledge is so developed and precise to encourage human habitation of tall structurestoday, how is it possible that 1000 years ago structures like the Borobudur and the Prambanan were constructed that still stand and take on the load of 1000 of visitors each day . This aspect few researchers have gone into. applied fractal geometry and self-similarity of the building is emerged as the building process implement the metric rules, since there is no universal metric standard known in ancient traditional Javanese culture thus the architecture is not based on final master plan. Hokky Situngkir, Dept. of Computational Sociology, Bandung Fe Institute Center for Complexity, Surya University observed in his paper *Borobudur was Built Algorithmically that* no universal metric standard known in ancient traditional Javanese culture thus the architecture is not based on final master plan. https://arxiv.org/ftp/arxiv/papers/1508/1508.03649.pdf
Fractal geometry and self-similarity of the building apart, such structures generate awe and wonder amongst us.

In https://whc.unesco.org/en/list/592/ it is noted that This famous Buddhist temple, dating from the 8th and 9th centuries, is located in central Java and was used as a Buddhist temple from its construction until sometime between the 10th and 15th centuries when it was abandoned. Since its re-discovery in the 19th century and restoration in the 20th century, it has been brought back into a Buddhist archaeological site.

It was built in three tiers: a pyramidal base with five concentric square terraces, the trunk of a cone with three circular platforms and, at the top, a monumental stupa. The walls and balustrades are decorated with fine low reliefs, covering a total surface area of 2,500 m^2. Around the circular platforms are 72 openwork stupas, each containing a statue of the Buddha. The main temple is a stupa built in three tiers around a hill which was a natural centre: a pyramidal base with five concentric square terraces, the trunk of a cone with three circular platforms and, at the top, a monumental stupa. The walls and balustrades are decorated with fine low reliefs, covering a total surface area of 2,520 m^2. Around the circular platforms are 72 openwork stupas, each containing a statue of the Buddha.

Corridors on the roof top

The vertical division of Borobudur Temple into base, body, and superstructure perfectly accords with the conception of the Universe in Buddhist cosmology. It is believed that the universe is divided into three superimposing spheres, *kamadhatu, rupadhatu*, and *arupadhatu*, representing respectively *the sphere of desires* where we are bound to our desires, *the sphere of forms* where we abandon our desires but are still bound to name and form, and *the sphere of formlessness* where there is no longer either name or form. At Borobudur Temple, the *kamadhatu* is represented by the base, the *rupadhatu* by the five square terraces, and the *arupadhatu* by the three circular platforms as well as the big stupa. The whole structure shows a unique blending of the very central ideas of ancestor worship, related to the idea of a terraced mountain, combined with the Buddhist concept of attaining Nirvana.

The Temple should also be seen as an outstanding dynastic monument of the Syailendra Dynasty that ruled Java for around five centuries until the 10th century.The Borobudur Temple Compounds consists of three monuments: namely the Borobudur Temple and two smaller temples situatued to the east on a straight axis to Borobudur. The two temples are Mendut Temple, whose depiction of Buddha is represented by a formidable monolith accompanied by two Bodhisattvas, and Pawon Temple, a smaller temple whose inner space does not reveal which deity might have been the object of worship. Those three monuments represent phases in the attainment of Nirvana.

1. **Harmonious marriage of stupas, temple and mountain**: Borobudur Temple Compounds with its stepped, unroofed pyramid consisting of ten superimposing terraces, crowned by a large bell-shaped dome is a harmonious marriage of stupas, temple and mountain that is a masterpiece of Buddhist architecture and monumental arts.

2. **Outstanding example of Indonesia’s art and architecture from between the early 8th and late 9th centuries**: Borobudur Temple Compounds is an outstanding example of Indonesia’s art and architecture from between the early 8th and late 9th centuries that exerted considerable influence on an architectural revival between the mid-13th and early 16th centuries.

3. **Blending of indigenous ancestor worship and the Buddhist concept of attaining Nirvana:** Laid out in the form of a lotus, the sacred flower of Buddha, Borobudur Temple Compounds is an exceptional reflection of a blending of the very central idea of indigenous ancestor worship and the Buddhist concept of attaining Nirvana.

The ten mounting terraces of the entire structure correspond to the successive stages that the Bodhisattva has to achieve before attaining to Buddhahood.

4. **Triad of Temples:** The boundaries contain the three temples that include the imaginary axis between them. Although the visual links are no longer open, the dynamic function between the three monuments, Borobudur Temple, Mendut Temple, and Pawon Temple is maintained.

    a. UNESCO also noted that the main threat to the ensemble was weak developmental regulations.

    b. Tourism also exerted considerable pressure on the property and its hinterland.

    c. There was a growing rate of deterioration of the building stone, the cause of which needs further research. There is also a small degree of damage caused by unsupervised visitors.

    d. The eruption of Mount Merapi is also considered as one of the potential threats because of its deposit acidic ash as happened in 2010.

The beginnings of the Buddhist school of architecture can be traced back to B.C. 255 when the Mauryan emperor Asoka established Buddhism as the state religion of his large empire. Buddhism spread rapidly throughout India and other parts of Asia. Buddhism was, as it were, a graphic creed, and correspondingly its expansion was accompanied by a distinctive style of architecture that expressed the teachings of the Buddha. In India this early Buddhist art was influenced to a large extent by Asoka. He was responsible for the construction of several *stupas*, which are sacred mounds of brick commemorative of the Buddha. Asoka also constructed stone pillars symbolizing his creed. These were lofty free-standing monolithic columns erected on sacred sites. The most famous of these is at Sarnath.

From at least the third century B.C., Buddhist ritual focused on stupas, stylized replicas of the mounds of earth in which early Buddhists interred relics of the Buddha. Beginning in the first century B.C., Buddhist monks in western India began manipulating the physical shape of monastic stupas to make them appear taller and more massive than they actually were.

These manipulations were used to help assert authority over the Buddhist laity. Employing theories of practice, materiality, and semiotics, later stupas became symbols of the Buddha and Buddhist theology.

The Buddhist image cult and Mahayana Buddhism emerged in the first through fifth centuries A.D. due to this change.The development of Mahayana Buddhism and Buddha images signified a return to iconic worship of the Buddha. [1]

Buddhist Architecture and Sculpture

The Stupa in India first built in the second century BCE to house the Buddha's relics was later used as symbolic or commemorative purposes. Then Buddhism which started in India reached China at the Han Dynasty (67CE). Together with the literature of teachings came the need for architecture to receive the holy relics as well as to establish educational institutions for Buddhism. So this is the beginning of Buddhist architecture in China. With the fusion of Buddhism and the Han culture and technology, pagodas were built. These buildings find their shapes and sizes in great variety as they appeared in different places. How these forms relate to the philosophy of Buddhism will be discussed. On the other hand, Buddhism was disseminated directly into Tibet in the seventh century. Indian Stupas were also transformed through local culture and technology into Tibetan Chorten. These can be placed within temples or individually. different symbolic meanings of these Stupa, Pagoda and Chorten in the context of the philosophy of Buddhism. [1]

- Stupas evolved over time from simple funerary monuments to elaborately decorated objects of veneration.
- Emperor Ashoka, who ruled from 274–236 BCE during the Maurya Dynasty , is said to have redistributed the relics housed in the original stupas of the Buddha into thousands of stupas throughout India.
- All stupas contain a treasury , a Tree of Life, and small offerings known as Tsa-Tsas. It is believed that the more objects placed into the treasury, the stronger the stupa's energy.
- There are five types of stupas: Relic stupas, Object stupas, Commemorative stupas, Symbolic stupas and Votive stupas. A stupa is thought to bring enlightenment to the one who builds and owns it; it is also considered a placed of worship for many Buddhists.

Structure and Style

While they can vary visually, all stupas have a few features in common. Every stupa contains a treasury filled with various objects—small offerings, or Tsa-Tsas, fill the majority of the treasury, while jewelry and other precious objects are also placed within. It is believed that the more objects placed into the treasury, the stronger the stupa's energy.

The Tree of Life, a wooden pole covered with gems and mantras , is an important element of every stupa and is placed in the stupa's central channel during an initiation ceremony , where participants' most powerful wishes are stored.

There are five types of stupas:

1. Relic stupas, in which the relics of Buddha and other religious persons are buried.
2. Object stupas, in which the objects belonging to Buddha or his disciples are buried.
3. Commemorative stupas, built to commemorate events in the life of Buddha and his disciples.
4. Symbolic stupas, built to symbolize various aspects of Buddhist theology.
5. Votive stupas, constructed to commemorate visits or gain spiritual benefits.

In the Buddhist religion, it is believed that a stupa brings enlightenment to the one who builds and owns it. In addition, the stupa is considered a place of worship, and many Buddhists complete pilgrimages to significant stupas.

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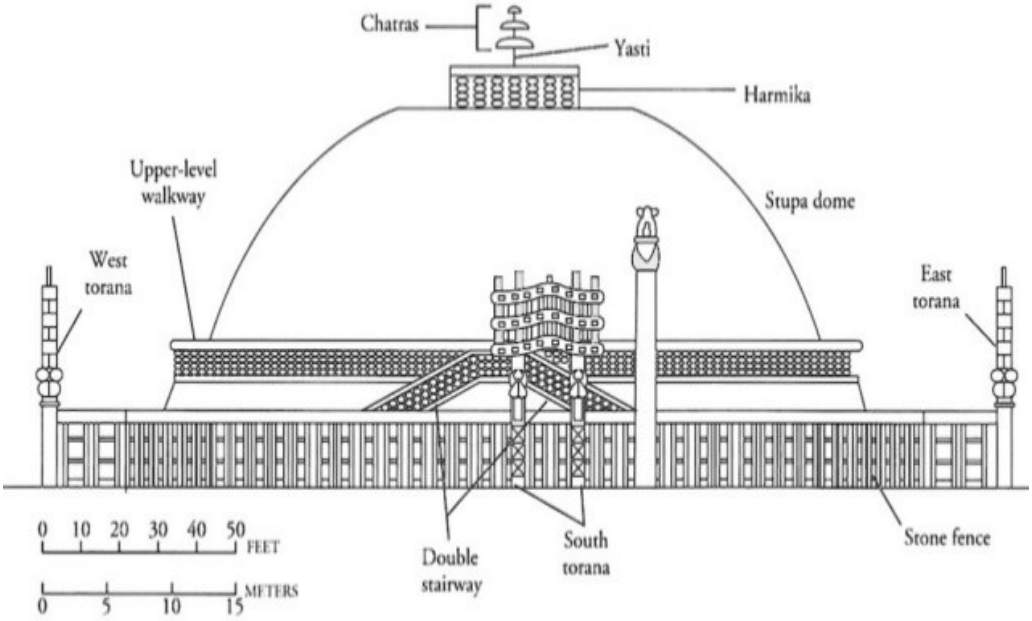
1. Stupa, Pagoda and Chorten: origin and meaning of Buddhist Architecture W.Wong,2014https://www.semanticscholar.org/paper/Stupa%2C-Pagoda-and-Chorten%3A-origin-and-meaning-of-Wong/512d89e26a97af79c13b81d7d231525fb4ab86ba#paper-header

According to Shubham Jaiswal in his paper Genesis of Stupas
(Conference: International Conference of Architectural Science Association 2019,Geethanjali Raman,Shubham Jaiswal,Avlokita Agrawal
https://www.researchgate.net/publication/339676008_GENESIS_OF_STUPAS)

Architecturally speaking, the earliest and most basic interpretation of stupa is nothing but a
dust burial mound. However, the historic significance of this built form has evolved through time, as has its rudimentary structure. The massive dome-shaped “anda” form which has now become synonymous with the idea of this Buddhist shrine, is the result of years of cultural, social and geographical influences.

The beauty of this typology of architecture lies in its intricate details, interesting motifs and immense symbolism, reflected and adapted in various local contexts across the world. Today, the word “stupa” is used interchangeably while referring to monuments such as pagodas, wat, etc. This paper is, therefore, an attempt to understand the ideology and the concept of a stupa, with a focus on tracing its history and transition over time. The main objective of the research is not just to understand the essence of the architectural and theological aspects of the traditional stupa but also to understand how geographical factors, advances in material, and local socio-cultural norms have given way to a much broader definition of this word, encompassing all forms, from a simplistic mound to grand, elaborate sanctums of great value to architecture and society as a whole.

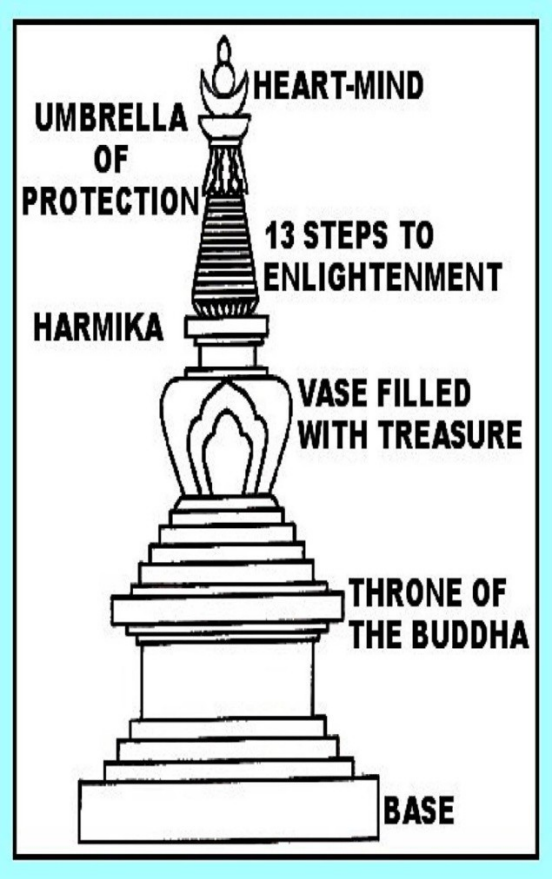


This word is now used for the pre-eminent type of Buddhist monument, which is at least a freestanding mound, usually with a circular drum (Medhi) forming the base for a massive solid dome (anda) topped by a turret (chattri), while the bell or dome-shaped mound covers the relics or holy objects At its simplest, a stupa is a dirt burial mound faced with stone. Stupas exist all over the world and are one of the oldest Buddhist monuments.

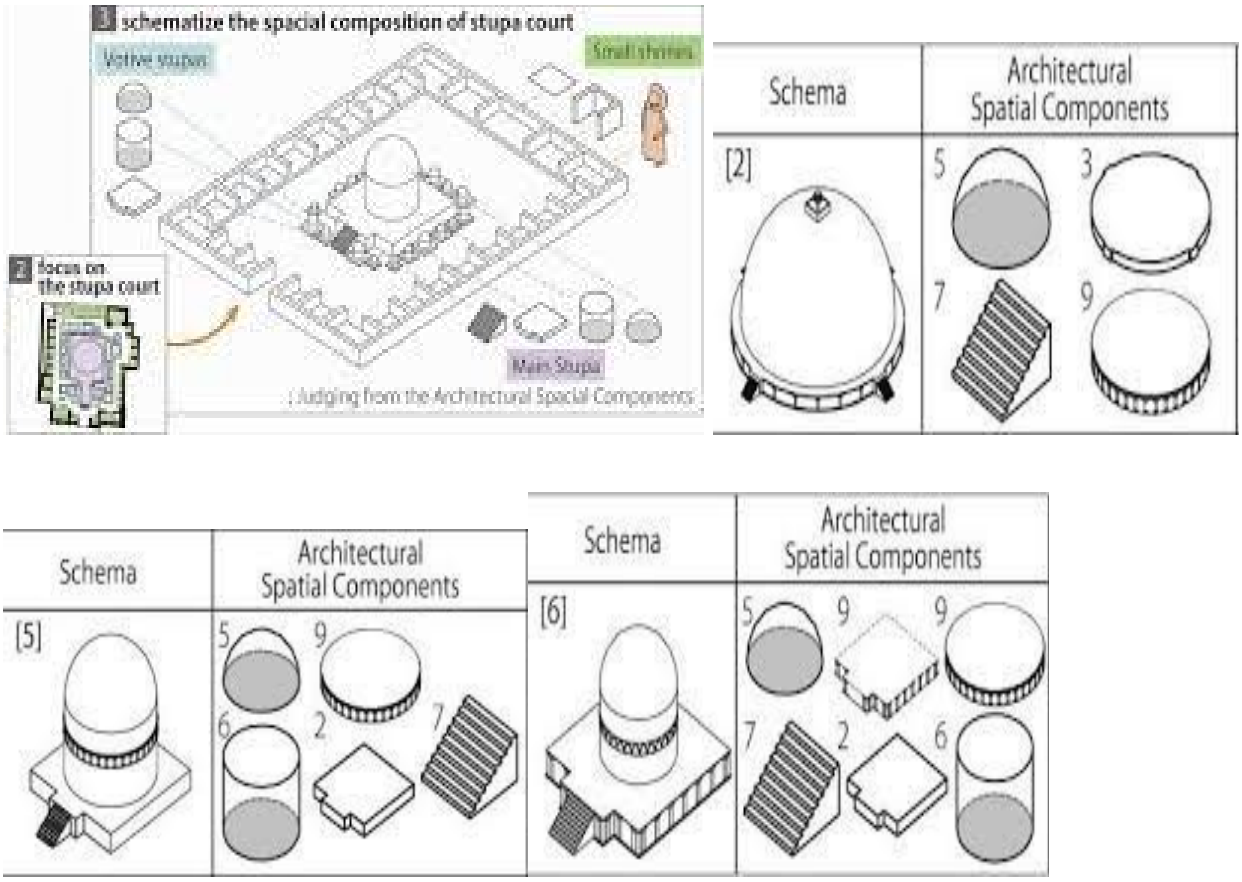
Historically, stupas have been symbolize and represent the following elements:
1. The Buddha,
2. The path to Enlightenment,
3. A mountain and
4. The universe all at the same time.

A stupa, which was conceived as a simple monument for the Buddha's corporeal relics, has over time transformed in its form and nomenclature and resulted in various types of structures all over the world. In some regions, even supplementary structures like monasteries have come up alongside stupas, fuelling the inception of new Buddhist orders and sects.

However, the core ideology of the stupa remains constant throughout each new development, as
does its symbolism and several crucial architectural features. These characteristics must, therefore, be given due consideration and importance while designing any stupa project.



Simple pic to introduce the perspective of stupas



In her article on Symbolism of a Stupa[1] , Supriya Sinha believes that Containment finds significance in the vedic corpus, and, antedates it, as is evident from depictions in Indus valley seals .This decryption at the emblematic level begs an obvious question. What would compel a heterodox religion to attach itself with conventional symbolism? The dichotomy is explicable if one views the stupa as a product of its times. A time when structural aspects were based not on functional, utilitarian foundations but on deeply spiritual conceptions. The act of creation, as Coomarswamy has famouly said, was an act of replication."We must do what the gods did in the beginning. Thus the gods did; thus men do." The stupa, in its meaning, is replete with this primordial injunction and its appropriation reflects fundamental, primal, human motivations.

At another level, this inclusion may have been necessitated by the dynamics of the existing religious milieu. A rudimentary situation analysis of the moment in time when this fledgling religion operated, and, when the first stupa was instituted, reveals the case of a relatively new entrant jostling for space against a dominant ideology. Of an incumbent mythology replete with cosmological interpretations and paradigmatic creator gods. In this setting, legitimacy would require equally potent antecedents. What better way to

consecrate the remains of the one, who, like the Vedic god, Indra was born from his mother's side than to have the sacred place of his interment evoke the archetypal feat of Indra?

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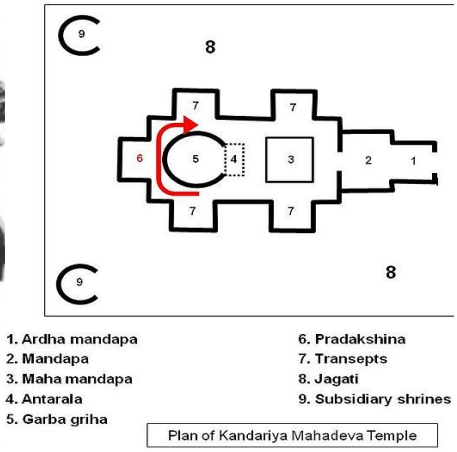
1. (http://thesacredspace.in/?p=163#:~:text=In%20its%20most%20fundamental%20essence,the%20remains%20of%20the%20Buddha%20.&text=In%20its%20earliest%20meanings%2C%20the,the%20remains%20of%20the%20Buddha%20)

Parikrama or Pradakshina refers to circumambulation of sacred places to imbibe their energy in Sikh, Hindu, Jain or Buddhist context, and the path along which this is performed. **Parikrama** means "the path surrounding something" in Sanskrit, and is also known as **Pradakshina** ("to the right"), representing circumambulation. Both words are mostly used in the context of religious deities in a temple, sacred rivers, sacred hills and a close cluster of temples, and "doing a parikrama" as a symbol of prayer is an integral part of Hindu worship. In Hinduism and other Indian religions, the Parikrama inside temples or sacred sites is traditionally clockwise.

Most Hindu temples and Buddhist Stupa include various Pradakshina paths. Pradakshina paths are defined. as:
Circumbulatory or pathway around the shrine of the temples by keeping time is a common form of prayer in India.It includes Narmada,Shetrunjaya,Girnar. This pathway made of stone around the shrine is called Pradakshina path.

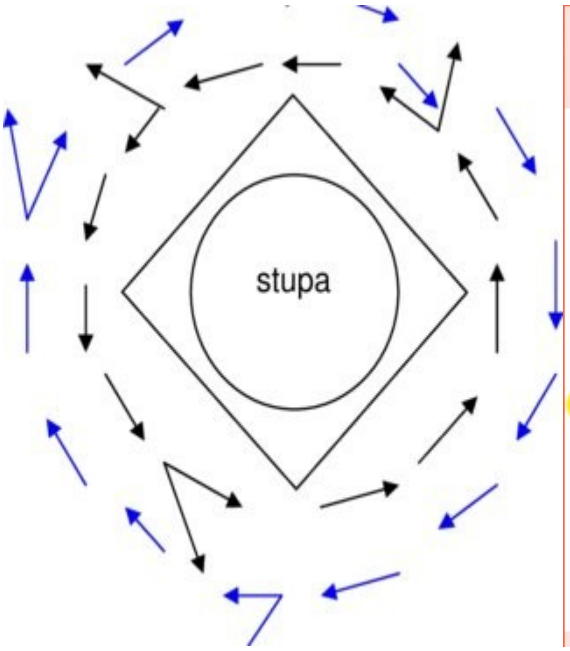
Parikrama is also practiced in Buddhism, Jainism and Sikhism.

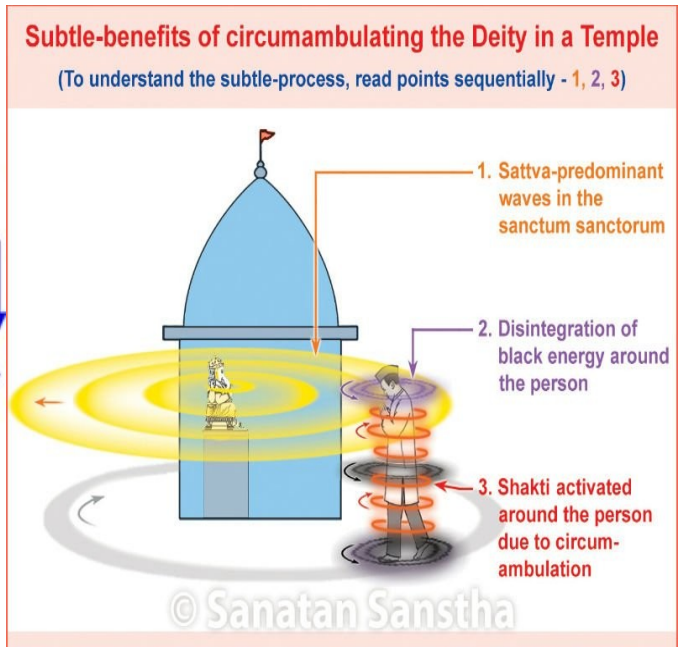


Pic shows circumambulatory path of a STUPA(Left Pic) and Hindu temple.

There could be one surrounding the main deity, other paths could be broader being concentric to the main path. However, it is not uncommon to find non-concentric parikrama paths in a single temple structure. At times the outermost parikrama path covers the whole village/town/city, thereby implying that the length of the path can stretch.
Parikrama is done around sacred fire (Agni – the fire God), Tulsi plant (Ocimum tenuiflorum) and Peepal tree. Parikrama of Agni or Agni Pradakshina is a part of the Hindu marriage ceremony. Some of the Parikramas are Narmada River, Govardhan hill, Vrindavan, Vraj Mandala, Dwadash Madhav parikrama Tirthraj Prayag, Ayodhya, Girnar, Chitrakoot hill, Varanasi, Mathura, and Mathura-Vrindavan yugalabandi in Kartik .....
Typically, Parikrama is done after the completion of traditional worship (puja) and after paying homage to the deity. Parikrama is supposed to be done with a meditative mood.

- The pathway made of granite stone around the shrine is called the Pradakshina path.
- Pradakshina around the sacred fire is a part of the Hindu marriage ceremony.





Schematic drawing of traffic (in black) and circumambulation (in blue) routes around stupa, south end of Zhongdian Town.

In Buddhism circumambulation or pradakhshina has been an important ritual since early times. Sacred structures such as stupa or images have a pradakhshina path around them. The chaitya is a distinct ancient type of building that only survives in Indian rock-cut architecture, a hall with a stupa at the far end, always built with a rounded apse-like end, to allow pradakhshina.[14] A mandapa (prayer hall), added in the front transforms the original stupa into the stupa shrine — as a sacred entity which requires a circumambulatory path around it for the purpose of worship. The whole structure is planned in such a way that it becomes the centre of the mandala and symbolically represents Mount Meru.
Buddhist faithful may perform pradakhshina by prostrating themselves at every step, thus greatly prolonging the process. The most extreme pradakhshina is that of the sacred Mount Kailash in Tibet, a mountain trek some 52 km (32 mi) long, at altitudes between 15,000 ft (4,600 m) and 18,200 ft (5,500 m). This may also be undertaken by Hindus and Jains, and some pilgrims progress by prostration, taking some weeks.

Further according to Ms. Supriya Sinha in her brilliant article" Thus in the design of the Stupa the vedika enclosure marks off a path (Pradakshina Path) for the ritual of circumambulation. An important rite, it involved a physical engagement with the stupa and was performed by entering the precinct through the east gate and walking clockwise. The directional emphasis related the devotee to the passage of the sun, "the transcendent centre of the universe" , "cosmic intelligence" whose light is "intellectual wisdom". In vedic mythology Indra is credited with releasing the sun , setting its "wheel in motion" and "making a pathway through the darkness" . The Buddha, whose birth is likened to the rising of the sun , compares his abhijana ("superknowledge") to a rediscovery of ancient wisdom , " clearing of an ancient jungle path from the brush that has overgrown and concealed it for generations" – a veritable pathway, a casting of light on what has been hidden in the darkness. And thence he proceeds to "turn the wheel of law". With these inherent parallels, the ritual act performs the important function of linking the worshipper with the wheel turning Buddha, and the Sun , on a path that is homologous with the archetypal path .A further instrument to re-emphasize this symbolism is seen in the alignment of the gateways, which form a cosmological diagram in the form of a swastika- a metonymical symbol evoking the wheel and the movement of the light giving sun.
This act, replete with cosmological significance puts the worshipper in harmony with the cosmos while it also reminds him of the Buddha and his odyssey across several lifetimes to attain final liberation-transcendental nirvana.

At the centre of the stupa complex is the solid hemispherical dome described variously in Buddhist texts as garbha, container or alternatively as anda . It bears within itself the seed (bija)-relic. Symbolically this links

the dome to the cosmic womb eg: the vedic hiranyagarbha (golden womb) which emerges from the primordial waters of chaos . This analogy is explicit in reliefs at Sanchi and on some early coins where the stupa is shown floating on water .So deep are the cosmological interlinkages that the mythic womb, the embodiment of life and prosperity, was said to encompass the riches of the universe. In a ritual enactment of the myth, the relic caskets are often made of precious metals/stone and routinely suffused with precious elements.
In the brahmanical context, the womb represents the creative unity. In the Buddhist context, it is the enfolder of the seed and signifies the involutional tendency of the spiritual path- the return to the centre, to unity. “The stupa symbolically designates this centre to which the seeker directs his life’s pilgrimage”. and it bears within itself the “pivotal presence” of the wheel turning Buddha .

This is significant in the light of inscriptions , which state that the corporeal remains of the Buddha are “endowed with life” (“prana sammada”) for it implies that the dome not only allows the devotee to experience proximity to the Buddha, but also makes him aware of his involutional unity.

The cosmological theme continues with the axial pillar which represents the world axis . This pole is symbolic of the link between the human and the divine worlds. It indicates a pathway of spiritual acscent, an upward movement away from the confines of the physical world , to the limitless realm. In this sense, the pole is a beacon, a representation of the devotee’s goal, for in its verticality, one can measure one’s own progress towards the supreme attainment, a goal triumphantly achieved by the Buddha in nirvana. *http://thesacredspace.in/?p=163#:~:text=In%20its%20most%20fundamental%20essence,the%20remains%20of%20the%20Buddha%20.&text=In%20its%20earliest%20meanings%2C%20the,the%20remains%20of%20the%20Buddha%20*.

Perspective or View or position in design architecture

What are the 4 types of perspective drawing?

In linear perspective, there are 4 major types of perspective defined by the number of primary Vanishing Points lying on the Horizon Line:

- 1-point perspective,
- 2-point perspective,
- 3-point perspective,
- and Multi-point perspective.

Linear or point-projection **perspective** (from Latin: *perspicere* 'to see through') is one of two types of graphical projection perspective in the graphic arts; the other is parallel projection. Linear perspective is an approximate representation, generally on a flat surface, of an image as it is seen by the eye. The most characteristic features of linear perspective are that objects appear smaller as their distance from the observer increases, and that they are subject to *foreshortening*, meaning that an object's dimensions along the line of sight appear shorter than its dimensions across the line of sight. All objects will recede to points in the distance, usually along the horizon line, but also above and below the horizon line depending on the view used. The main characteristic of perspective is that objects appear smaller the further they are from the observer. Perspective is often used to generate 'realistic' images of buildings to help people understand how they will look on the inside, from the outside, or within their context. Perspective is the space in which the drawings – and the architecture that they propose – occur. ' This unique wall hang according to the logic of vanishing points and perspective lines provides the viewer with their own unique perspective on artwork by some of the most talented designers in history.

Perspective works by representing the light that passes from a scene through an imaginary rectangle (realized as the plane of the painting), to the viewer's eye, as if a viewer were looking through a window and painting what is seen directly onto the windowpane. If viewed from the same spot as the windowpane was painted, the painted image would be identical to what was seen through the unpainted window. Each painted object in the scene is thus a flat, scaled down version of the object on the other side of the window. Because each portion of the painted object lies on the straight line from the viewer's eye to the equivalent portion of the real object it represents, the viewer sees no difference (sans depth perception) between the painted scene on the windowpane and the view of the real scene. All perspective drawings assume the viewer is a certain distance away from the drawing. Objects are scaled relative to that viewer. An object is often not scaled evenly: a circle often appears as an ellipse and a square can appear as a trapezoid. This distortion is referred to as foreshortening.

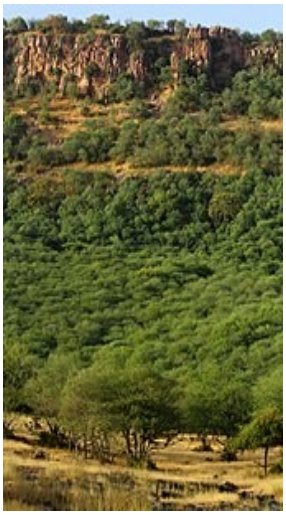
Perspective drawings have a horizon line, which is often implied. This line, directly opposite the viewer's eye, represents objects infinitely far away. They have shrunk, in the distance, to the infinitesimal thickness of a line. It is analogous to (and named after) the Earth's horizon.

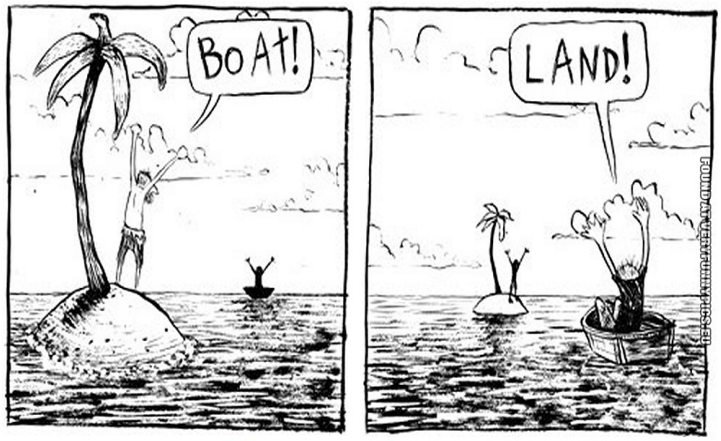
Any perspective representation of a scene that includes parallel lines has one or more vanishing points in a perspective drawing. A one-point perspective drawing means that the drawing has a single vanishing point, usually (though not necessarily) directly opposite the viewer's eye and usually (though not necessarily) on the horizon line. All lines parallel with the viewer's line of sight recede to the horizon towards this vanishing point. This is the standard "receding railroad tracks" phenomenon. A two-point drawing would have lines parallel to two different angles. Any number of

vanishing points are possible in a drawing, one for each set of parallel lines that are at an angle relative to the plane of the drawing.
Perspectives consisting of many parallel lines are observed most often when drawing architecture (architecture frequently uses lines parallel to the x, y, and z axes). Because it is rare to have a scene consisting solely of lines parallel to the three Cartesian axes (x, y, and z), it is rare to see perspectives in practice with only one, two, or three vanishing points; even a simple house frequently has a peaked roof which results in a minimum of six sets of parallel lines, in turn corresponding to up to six vanishing points.
Of the many types of perspective drawings, the most common categorizations of artificial perspective are one-, two- and three-point. The names of these categories refer to the number of vanishing points in the perspective drawing.

View or position (Pali *diṭṭhi*, Sanskrit *dṛṣṭi*) is a central idea in Buddhism

View or **position** (Pali *diṭṭhi*, Sanskrit *dṛṣṭi*) is a central idea in Buddhism. In Buddhist thought, a view is not a simple, abstract collection of propositions, but a charged interpretation of experience which intensely shapes and affects thought, sensation, and action. Having the proper mental attitude toward views is therefore considered an integral part of the Buddhist path, as sometimes correct views need to be put into practice and incorrect views abandoned, and sometimes all views are seen as obstacles to enlightenment.





Perspective…

In describing the highly diverse intellectual landscape of his day, the Buddha is said to have referred to "the wrangling of views, the jungle of views".

Views are produced by and in turn produce mental conditioning. They are symptoms of conditioning, rather than neutral alternatives individuals can dispassionately choose. The Buddha, according to early texts, having attained the state of unconditioned mind, is said to have "passed beyond the bondage, tie, greed, obsession, acceptance, attachment, and lust of view."[

Those who wish to experience nirvana must free themselves from everything binding them to the world, including philosophical and religious doctrines. Right view as the first part of the Noble Eightfold Path leads ultimately not to the holding of correct views, but to a detached form of cognition.

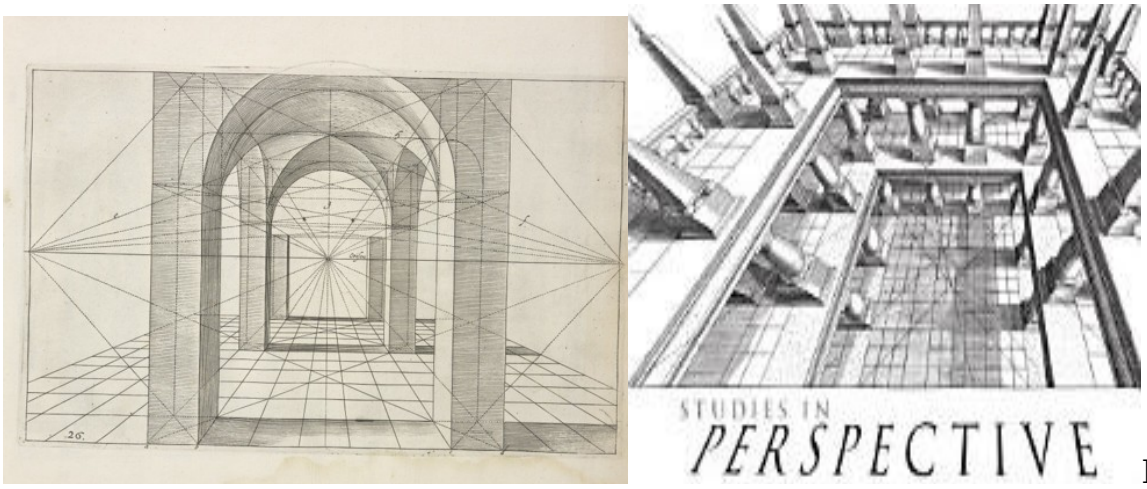
What is perspective and where does it come from?

Perspective is a method of representing three-dimensional space on a flat surface. It depicts an idea of space that seems to coincide with our understanding of reality. Yet, it is not reality. It is a system, an artificial construct, that manipulates and distorts our visual perception while enabling accessible and popular representation of a design in three dimensions.

The depiction of space has a long and wide-reaching history as Sam Jacob writes in the accompanying essay to the exhibition:

'If we scan a history of how space has been drawn, either as representation of the world or as architectural proposition, we see just how fluid and varied conceptions of space have been …from, say, Neolithic cave paintings

through medieval maps, Byzantine paintings, Asian handscrolls to Google Maps we see how different worldviews are codified through representation. We see space itself shifting like a camera pulling focus.'



Perspective was evidenced and formalised in the Italian Renaissance, but of course existed long before this era. Vitruvius, who published the first architectural treatise 'Ten Books of Architecture', credits the painter Agatharchus (fifth century BC) with knowledge of perspective when designing stage sets. However, it was Leon Battista Alberti in 'De pictura' (1435), who first described the principle.

Since then, a number of architects, mathematicians and artists have written extensively on the subject with Sebastiano Serlio being the first architect to dedicate an entire book to perspective in the mid-sixteenth century.

Through clear instructive text accompanied by woodcuts, Serlio explains the basic use of a vanishing point, perspective lines and horizon to draw in three-dimensions. Not long after its usage in depicting and decorating architecture was the technique of perspective deployed by the military and the navy, for topographic surveying, designing fortifications, calculating projectile trajectories and navigation.

Chapter 5
.....the processional walkway to Borobudur

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For thousand years, Vesak, also known as Buddha Jayanti, Buddha Purnima and Buddha Day,which is a holiday traditionally observed by Buddhists in South Asia and Southeast Asia as well as Tibet and Mongolia. The festival commemorates the birth, enlightenment (Nibbāna), and death (Parinirvāna) of Gautama Buddha in Theravada, Tibetan Buddhism and Navayana.

The name *Vesak* is derived from the Pali term *vesākha* or Sanskrit *vaiśākha* for the lunar month of Vaisakha, which is considered the month of Buddha's birth. In Mahayana Buddhist traditions, the holiday is known by its Sanskrit name (Vaiśākha) and derived variants of it.

In the East Asian tradition, a celebration of Buddha's Birthday typically occurs around the traditional timing of Vesak, while the Buddha's awakening and passing away are celebrated as separate holidays that occur at other times in the calendar as Bodhi Day and Nibbāna Day. In the South Asian tradition, where Vesak is celebrated on the full moon day of the Vaisakha month, the Vesak day marks the birth, enlightenment, and the ultimate passing away of the Buddha

The Temple of Borobudur or sometimes "Barabudur" is a Mahayana Buddhist temple located close to Muntilan on the island of Java in Indonesia. Built during the rule of the Sailendra Dynasty (c. 650-1025 CE), Borobudur remains the world's largest Buddhist temple. The Buddhists among the Javanese population performed pilgrimages and other rituals at Borobudur until around the 14th and 15th centuries CE when the temple was abandoned as many Javanese converted to Islam. Rediscovered in 1814 CE, Borobudur has since then been the subject of immense research and archaeological investigations by the Dutch and Javanese. UNESCO designated Borobudur as a World Heritage Site in 1991 CE following a restoration in the 1970s and 1980s CE overseen by President Suharto (1967-1998 CE) and UNESCO, and the iconic temple continues to play a powerful role in shaping Indonesian aesthetics, architecture, and cultural identity. Borobudur is the most visited tourist site in Indonesia.

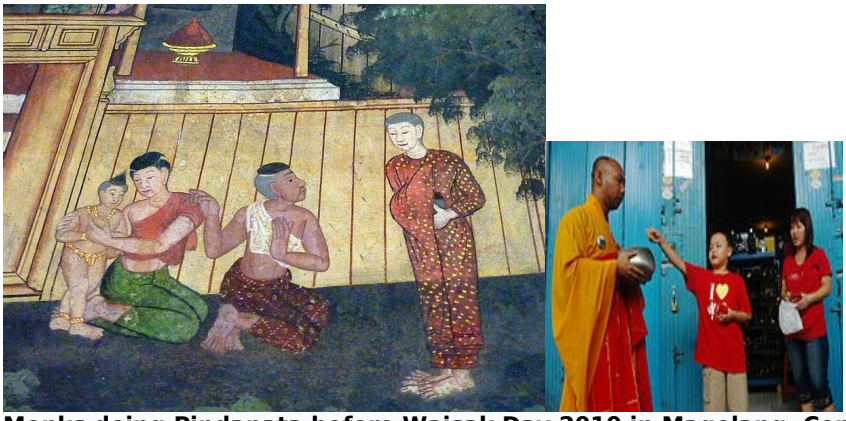
Procession at Borobudur since 1000 years?

This significant and traditional holy day is observed throughout Indonesia, where it is known as Waisak Day. At Borobudur, thousands of

Buddhist monks will join to repeat mantras and meditate as they circuit the temple in a ritual called "Pradaksina". This is a form of tribute to the temple. Monks celebrate the special day by bottling holy water (which symbolises humility) and transporting flames (which symbolize light and enlightenment) from location to location. The monks also take part in the "Pindapata" ritual, where they receive charity from the people of Indonesia. Waisak Day in Indonesia has been celebrated as a national public holiday every year since 1983.

In the Map one can clearly see the 3 temples in a line near to each other

During the Pindapata ceremony balls of rice c are offered to the spirit of ancestors. Piṇḍas are balls of cooked rice mixed with ghee and black sesame seedlled pindas s offered to ancestors during Hindu funeral rites (Antyesti) and ancestor worship (Śrāddha). According to traditions in the Garuda Puran, offering a pinda to a recently departed soul helps to unite the soul with its ancestors. Pindas can be placed on a recently deceased person's hands and feet on their way to a funeral pyre.Pindas are offered to both maternal and paternal lineages. When making an offering of pindas the first can be offered to the father (or for widow's, their husband), the 2nd their father's father, the third their father's father's father, the 4th their mother, the 5th their father's mother, the 6th their father's mother's mother, and so on to cover ancestors from all sides of the family.



Monks doing Pindapata before Waisak Day 2010 in Magelang, Central Java. Chinese Indonesian Buddhist giving alms to the monks.

Since Buddhists observe Vesak day commemorating the birth, death, and the time when Siddhārtha Gautama attained the highest wisdom to become the Buddha Shakyamuni. Vesak is an official national holiday in Indonesia and the ceremony is centered at the three Buddhist temples by walking from Mendut to Pawon and ending at Borobudur. Vesak also is often celebrated in Sewu temple and numerous Buddhist temples in Indonesia.In Indonesia it has international colors as 1,000s of Buddhists congregate to Borobudur to take part in the marchof the procession which ends in offering the Pindas to Buddhas departed soul and also in the evening lighting Lanters and sending them skywords as a symbolic gesture to reach the exhalted one

The pinnacle of the ceremony will occur during full moon.The event is preceded by a rite to obtain holy water from the pristine springs at Jumprit in the Temanggung district, on 9thMay 2017. On the same day, this ritual will be followed by igniting the Vesak torch whose flames are taken from the natural eternal flames at Mrapen in the village of Grobogan, in the Purwodadi district, Central Java. The flame and holy water will then be kept in the **Mendut Temple** to be paraded and used during the ceremony at Borobudur on the actual Vesak day celebrations.

The ceremony will commence with prayers at the Mendut temple, then the crowds of pilgrims will walk together to the Borobodur temple carrying the flame of eternal fire, the holy water and Buddhist symbols that had been carefully guarded in the Mendut temple, to place these on the main altar which had been set up on the west side of the Borobudur temple.

The pinnacle of the Vesak ritual will commence at the Vihara Githa. Devotees will then continue with pradaksina or the ritual of prayers circling three times around the Borobudur temple, moving clockwise from east to west. An integral part of the ritual is the lighting up of candles and chanting of the Ghata Visaka Puja by the congregation. Nearing the final second of this year’s Vesak moment all devotees will meditate in deep spirituality

followed by blessings given by the Mahathera Bhikkhu and Mahasthavira Bhiksu.

Marking the pinnacle of Vesak's series of rituals some 1,000 Puja lanterns will be released into the sky symbolizing enlightenment for the entire universe. Conducted annually during the full moon in the month of May or at the *purnama sidhi* , Vesak commemorates three most important events in the life of Buddha Siddharta Gautama known as the *Tri Suci Waisak*. The first important event is the Birth of Prince Siddharta in the Lumbini Gardens in 623 BC. The second episode is the enlightenment (*nirvāṇa*) in which Prince Siddharta became the Buddha in *Bodhgaya* at the age of 35 in 588 BC, and the third is the passing (*Parinirvāna*) of Gautama Buddha at *Kusinara* at the age of 80 in 543 BC. Therefore, Vesak is also known as simply Budhha's day.

Positioning of the 3 Buddhist Stupas

During the restoration in the early 20th century, it was discovered that three Buddhist temples in the region, **Borobudur, Pawon and Mendut**, are positioned along a straight line. A ritual relationship between the three temples must have existed, although the exact ritual process is unknown.

Geography & History

The period in which the Javanese constructed Borobudur is shrouded in legend and mystery. No records pertaining to its construction or purpose exist, and dating the temple is based on artistic comparisons of reliefs and inscriptions found in Indonesia and elsewhere throughout Southeast Asia. Strong cultural and religious influenced arrived in what is now present-day Indonesia from the Indian subcontinent beginning around the 1st century CE. This influence grew rapidly from c. 400 CE onwards. Hindu and Buddhist merchants and traders settled in the region, intermarried with the local population, and facilitated long-distance trading relations between the indigenous Javanese and ancient India. Over the centuries, the Javanese blended the culture and religions of ancient India with their own.

The name "Borobudur" itself is the subject of intense scholarly debate and is a lingering mystery. Some scholars contend that the name stems from the Sanskrit Vihara Buddha Uhr or the "Buddhist Monastery on a Hill," while others, in turn, argue that Budur is nothing more than a Javanese place name. A stone tablet dating from 842 CE makes mention of Bhumisambharabhudara or the "Mountain of Virtues of Ten Stages of the Boddhisattva." It is probable that the name "Borobudur" could be related to "Bharabhudara."

Modern historians have all disagreed amongst each other as to the political and cultural events that led to Borobudur's construction as well. It is possible that the Hindu Sanjaya dynasty initially began construction of a Shivaite temple on the spot where Borobudur now sits around c. 775 CE and that they were unable to complete their temple as they were driven out

of the area by the Sailendra dynasty. (It should be noted, however, that other Javanese historians see the Sailendra and Sanjaya dynasties as one and the same family and that religious patronage simply changed as a result of personal belief. The general consensus is that there were two rival dynasties supporting different faiths.)


Ancient Indian Ship/Borobudur Model

Archaeological and scholarly consensus places the end of Borobudur's construction around c. 800-825 CE. King Samaratungga (r. c. 790-835 CE?) is traditionally regarded as the Javanese king who oversaw the completion of Borobudur's construction. Buddhist kings, like Samaratungga, were the rivals of the Hindu Sanjaya dynasty for power within the Mataram kingdom in central Java. The Hindu Javanese under the Sanjaya dynasty constructed Prambanan - Indonesia's largest Hindu temple, located some 19 km (12 miles) to the west of Borobudur- in the same century as Borobudur, and it is entirely possible that Prambanan's construction was a political and cultural response to that of Borobudur.

What is known is that Buddhists made pilgrimages and took part in Buddhist rituals at Borobudur during the early medieval period until the temple was abandoned at some point during the 1400s CE. The root causes for the abandonment of Borobudur are moreover debated, and the reasons why the temple was ultimately abandoned remains unknown. It is known that in the 10th or 11th century CE, the capital of the Mataram Kingdom moved eastwards away from Borobudur due to volcanic eruptions, which may have diminished Borobudur as a center of pilgrimage. Although Arab, Persian, and Gujarati traders brought Islam to what is present-day Indonesia as early as the 8th and 9th centuries CE, the acceleration of Javanese conversion to Islam began to increase rapidly only in the 15th century CE. As the Javanese population accepted Islam *en masse*, it makes sense that Borobudur would lessen in importance. Over the following centuries, earthquakes, volcanic eruption, and rainforest growth hid Borobudur from the Javanese, rendering it inaccessible. There is evidence, nonetheless, that Borobudur never left the collective cultural consciousness of the Javanese people. Even after their conversion to Islam, later Javanese

stories and myths expressed the temple's association with mystery and negative energies.

In 1814, the Lieutenant Governor-General Thomas Stamford Raffles (1781-1826 CE) who oversaw the brief British occupation of the Dutch East Indes permitted the Dutch explorer Hermann Cornelius (1774-1833 CE) to organize an expedition to find and locate Borobudur, which he did successfully the same year. In the years following Borobudur's rediscovery, the government of the Dutch East Indies commissioned and permitted archaeological studies of the temple, but looting was a major problem in the 19th and early 20th century CE. Experts recommended that Borobudur be left intact *in situ*, and the first restoration efforts lasted from 1907 to 1911 CE. Today, Borobudur is once again a site of Buddhist pilgrimage and a major tourist destination in Southeast Asia, but Indonesian officials remain worried about damage caused by the foot traffic at the temple, as well as lingering environmental and security issues.

Art & Architecture

Borobudur is made up of **three different monuments**: the main temple at Borobudur and two smaller temples located to the east of the main temple. The two smaller temples are the Pawon Temple and the Mendut Temple, the latter of which contains a large sculpture of Buddha surrounded by two Bodhisattvas. The Borobudur Temple Compounds consists of three monuments: namely the Borobudur Temple and two smaller temples situatued to the east on a straight axis to Borobudur. The two temples are Mendut Temple, whose depiction of Buddha is represented by a formidable monolith accompanied by two Bodhisattvas, and Pawon Temple, a smaller temple whose inner space does not reveal which deity might have been the object of worship. Those three monuments represent phases in the attainment of Nirvana.

Borobudur is an impressive and monumental ancient Buddhist structure that can only be rivaled in Southeast Asia by Angkot Wat in Cambodia, the Buddhist temples of Bagan in Myanmar (Burma), the Hindu temples of Mỹ Sơn in Vietnam, and the ruins of Sukhothai in Thailand. Borobudur's design is a mix of Javanese style and Gupta dynasty architecture, reflecting the blend of indigenous and Indian aesthetics in ancient Java. Over 500 statues of Buddha are positioned around Borobudur, and Borobudur contains roughly 3,000 bas-relief sculptures. These sculptures are all unique in that they depict the Buddha's teachings, life, and personal wisdom. When taken all together, Borobudur can claim to have the largest amount of Buddhist sculptures of any single site in the world today. It is known that in ancient times, sculptors decorated and adorned the temples' various galleries before everything was covered with paint and stucco. This method has helped better preserve these sculptures for over a thousand years.

It is estimated that over 1.6 million blocks of andesite - a volcanic rock - were used in Borobudur's construction. These rocks were cut and joined in a method that did not employ any mortar. Borobudur is made up of three

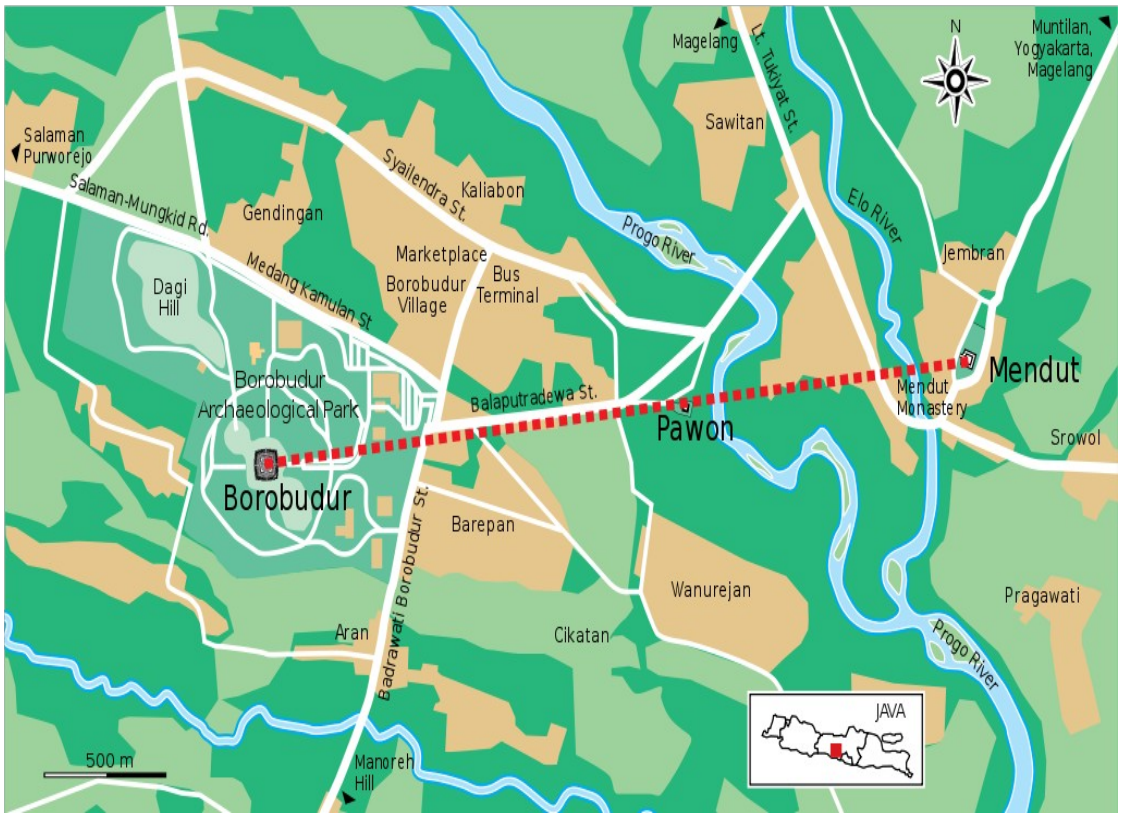
different monuments: the main temple at Borobudur and two smaller temples located to the east of the main temple. The two smaller temples are the Pawon Temple and the Mendut Temple, the latter of which contains a large sculpture of Buddha surrounded by two Bodhisattvas. Collectively, Borobudur, Pawon, and Mendut symbolize the path the individual takes in attaining Nirvana. All three temples lie in a straight line as well. Another Buddhist temple - Ngawen, which dates from the 8th century CE, is located just 10 km (6 miles) from the main temple at Borobudur. A ruined Hindu temple, the Banon Temple, lies just several meters north of Pawon.

The main temple structure at Borobudur is constructed on three levels with a pyramid-shaped base replete with five square terraces, the trunk of a cone with three circular shaped platforms, and on the upper level, a grand monumental stupa. Fine reliefs form part of the walls of the temples and cover an area of approximately 2,520 m2 (27,125 square feet). 72 stupas each with a statue of the Buddha inside are found around Borobudur's circular platforms. This allocation and delineation of space conforms to the Buddhist conception of the universe. In Buddhist cosmology, the universe is divided into three spheres known as *arupadhatu*, *rupadhatu*, and *kamadhatu*. *Arupadhatu* is here represented by the three platforms and large stupa, the *rupadhatu* is represented by the five terraces, and the *kamadhatu* is represented by the temple's base.
TEMPLE TRIAD-Straight-line arrangement of Borobudur, Pawon, and Mendut Temples

Yogyakarta is home to several other spectacular temples, which would be perfect to complete your temple tour. Some nearby temples around Borobudur one can explore are Mendut Temple, Ngawen Temple, and Pawon Temple.

Mendut Temple is located around three kilometers from Borobudur. This Buddhist temple was built around the same era as Borobudur in the reign of the Syailendra Dynasty. The temple has three Buddha Statues facing each other and the walls are graced with neatly carved reliefs. Around 5 km before Mendut Temple if you are traveling from Yogyakarta you will find Ngawen Temple. Same as Borobudur and Mendut Temple, *Ngawen* is a Buddhist Temple and built in the same era.

To the east around 1750 meters from Borobudur Temple, lays Pawon Temple. It is actually situated between Borobudur and Mendut Temple in Brojonalan Village, Borobudur District. The temple is recognized to be the storage of the King Indra’s weapon known as Vajranala shaped like lightning.



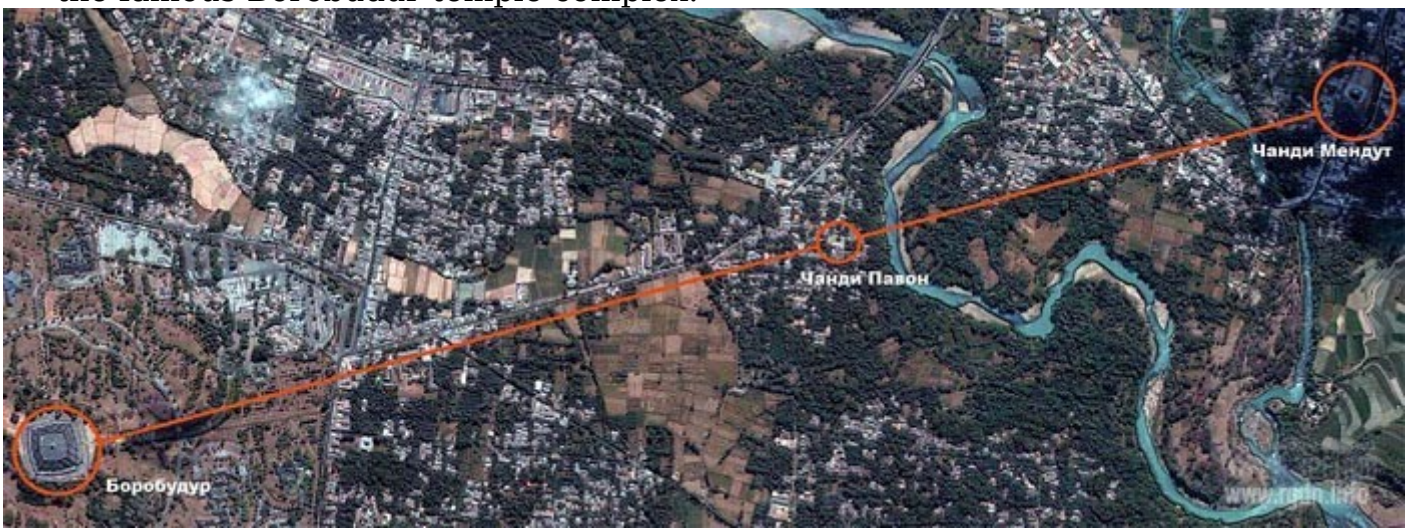
To explain the additions or extensions at Borabudur and Mendut by successive Shailendra rulers, possibly without exception, which have come to light during restoration activities at those temples, one needs to understand that religious merit of the royal zealot did increase to a great extent from the building of a stupa. Indeed for every spectator the sacred construction work would be an incentive to join the creed while it would help the initiate in his meditations aiming at the attainment of the Bodhi. Furthermore, the “accumulation of religious merit” which the monarch earned through the construction of a magnificent temple would also benefit his realm — “the thriving State of the Shailendras” as it is designated in the inscriptions of the period. This topographical relationship looks hardly casual, as probably a processional way ran along the line in ancient times (the path is still partly mimicked by the modern road from Borobodur to Pawon up to the river Pogo).

Borobudur Temple (Biggest Buddha’s temple in the world)
Borobudur, is a 9th-century Mahayana Buddhist Temple in Magelang, Central Java, Indonesia. The monument consists of nine stacked platforms, six square and three circular, topped by a central dome. The temple is decorated with 2,672 relief panels and 504 Buddha statues. The central dome is surrounded by 72 Buddha statues, each seated inside a perforated

stupa. It is the world's largest Buddhist temple, as well as one of the greatest Buddhist monuments in the world.
Built in the 9th century during the reign of the Sailendra Dynasty, the temple was designed in Javanese Buddhist architecture, which blends the Indonesian indigenous cult of ancestor worship and the Buddhist concept of attaining Nirvana. The temple also demonstrates the influences of Gupta art that reflects India's influence on the region, yet there are enough indigenous scenes and elements incorporated to make Borobudur uniquely Indonesian. The monument is both a shrine to the Lord Buddha and a place for Buddhist pilgrimage. The journey for pilgrims begins at the base of the monument and follows a path around the monument and ascends to the top through three levels symbolic of Buddhist cosmology: Kāmadhātu (the world of desire), Rupadhatu (the world of forms) and Arupadhatu (the world of formlessness). The monument guides pilgrims through an extensive system of stairways and corridors with 1,460 narrative relief panels on the walls and the balustrades. Borobudur has the largest and most complete ensemble of Buddhist reliefs in the world.

Chandi MENDUT and Chandi PAVON supplement the temple complex. They were built during the reign of King Indra (782–812 AD) of the Shailendra dynasty. The whole temple complex symbolizes the way of a spiritual seeker from the mundane life to the Divine life, to the state of Buddha. In old times a big road led from Borobudur eastern entrance to Chandi Mendut, passing through Chandi Pavon. Along the entire road there were walls with numerous towers, niches, and sculptures.

- Chandi Mendut,
- Chandi Pavon,
- the famous Borobudur temple complex.



Pawon Temple

Pawon temple (known locally as Candi Pawon) is a Buddhist temple located between two other Buddhist temples, approximately 1,150 metres away from Mendut and 1,750 metres away from Borobudur.
, Pawon is connected with the other two temples, all of which were built during the Sailendra dynasty (8th–9th centuries). Examines the detail and style of its carving this temple is slightly older than Borobudur.
The three temples were located on a straight line, suggesting there was a symbolic meaning that binds these temples.
“Between Mendut and Borobudur stands Pawon temple, a jewel of Javanese temple architecture. Most probably, this temple served to purify the mind prior to ascending Borobudur.”

The original name of this Buddhist shrine is uncertain. Pawon literally means “kitchen” in Javanese language, which is derived from the root word awu or dust. The connection to the word “dust” also suggests that this temple was probably built as a tomb or mortuary temple for a king. Pawon from the word Per-awu-an (place that contains dust), a temple that houses the dust of cremated king. However who was the personage that entombed here is still unknown. Local people name this temple as “Bajranalan” based on the name of the village. Bajranalan is derived from the sanskrit word Vajra (thunder or also a Buddhist ceremonial tool) and Anala (fire, flame). Due to its small size, Pavon resembles a memorial monument. When the temple was found, it was in a very poor condition. Themes of decorative reliefs in Pavon include the “heavenly tree”, vessels with gifts, bearded dwarfs spilling necklaces, rings and jewels from boxes. Such themes are explained by the fact that Chandi Pavon is dedicated to the deity of wealth Kubera, who was usually depicted at entrances to temples.
Inner premises of the temple are trimmed with dark volcanic stone. Although no statues have been preserved in Chandi Pavon, it is possible to ascertain by outer wall reliefs that the temple once was dedicated to Kubera – the generous lord of luck and wealth. There are also extant images of Kalpataru – the mythical tree of desires in Hindu and Buddhist traditions. The desires ingrained in righteous thoughts and true faith will be fulfilled.

In the contemporary era during the full moon in May or June, Buddhists in Indonesia observe Vesak annual ritual by walking from Mendut passing through Pawon and ends at Borobudur.

As it has been mentioned above, between Chandi Mendut and Borobudur there is the small Chandi Pavon,

Mendut Temple

Mendut temple is a ninth-century Buddhist temple, located in Mendut village, Mungkid sub-district, Magelang Regency, Central Java, Indonesia. The temple is located about three kilometres east from Borobudur. Mendut, Borobudur and Pawon, all of which are Buddhist temples, are located in one straight line. There is a mutual religious relationship between the three temples, although the exact ritual process is unknown.

Borobodur was once the center of religious rituals of Mahayana Buddhism, which was corroborated by the existence of other temples with Mahayana Buddhism around it. Studies conducted on the location of Borobudur and the other temples surrounding it shows that the three temples are positioned along a single straight line, which was organized during the construction of Mendut Temple. It is also shown that the imaginary line connecting the three temples is linked to Mount Merapi.Studies on the temples surrounding Borobudur show a similarity with regard to the period of construction, which is the era of Mataram Kuno (Ancient Mataram), as well as their religious affiliation, that is, Mahayana Buddhism, which excludes Banon Temple as it is filled with statues of Hindu Gods . These studies led to an interpretation that Borobudur Temple is highly associated with Pawon and Mendut Temples located in the east. The association between Borobudur and the two surrounding temples also identifies that the three temples were the centers for religious rituals in the past. Geographically, Ngawen Temple is located in the east of Borobudur Temple. However, no study has been conducted revealing the association between Borobudur, Pawon, Mendut, and Ngawen Temples in the past. To further observe the association between the four temples, this study will focus on

their location, religion, ornaments, and statues. The author believes that this research would provide a new interpretation of Borobudur and the surrounding Buddhist temples as monuments for sacred procession in the past and as a world heritage in the future.Field observation of the four temples, namely Borobudur, Pawon, Mendut, and Ngawen was conducted.

The temple possesses several meanings related to the belief of Mahayana Buddhism. Moreover, in the past, Borobudur had served as the center of other sacred buildings surrounding it . Within a distance of 5 km around the temple, there are three other temples affiliated with Mahayana Buddhism, among which are Pawon Temple (1,150 m from Borobudur) and Mendut (2,900 m). Borobudur, Pawon, and Mendut Temples are located in the west of Elo River, and Ngawen is, in fact, located in the east side of the river,which is, in turn, 4 km away from Borobudur .According to previous studies, Borobudur, Pawon, and Mendut Temples are positioned on a straight line and they form a triadic of sacred buildings affiliated to Mahayana Buddhism. However the imaginary axis connecting the three temples is not a straight line, and it is interpreted that they were the centers of religious rituals and processions in the past. Furthermore, it is suggested that the three temples were closely associated with Mount Merapi. Nevertheless, further examination of the map shows an addition temple called Ngawen Temple, from which a parallel imaginary axis can also be drawn, connecting it to the other three temples. Thus, on the basis of this fact, it can be interpreted that, in the past, the procession of the religious rituals might begin in Ngawen Temple and end in Borobudur.

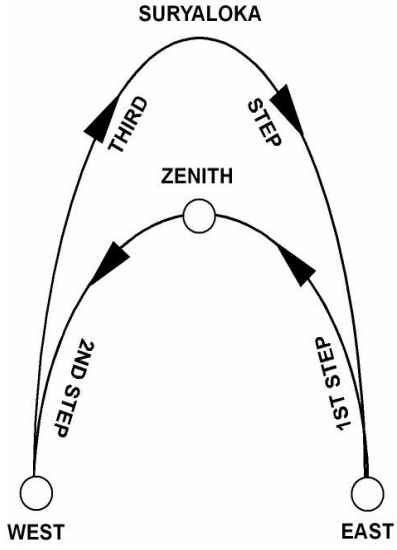
The layout of Chandi Mendut is traditional. It is a temple with a deity figure placed on a pedestal, intended for ritual processions. The walls contain thematic reliefs with scenes from Buddhist parables. The reliefs contain well-preserved images of Bodhisattvas. Inside Chandi Mendut itself there are three statues: Gautama Buddha in the middle, Bodhisattva Avalokiteśvara on the left, and a non-identified Bodhisattva on the right (there is an assumption that it is a statue of Vajrapani).

The most unusual thing is that Shakyamuni Buddha is sitting in a “European” or “royal” pose with his both feet put on the lotus pedestal and his knees widely parted, without any traces of clothes. Bodhisattvas are sitting in traditional poses with one foot under their body and the other foot lowered.In traditional Buddhist iconography the image of the body part relating to genitals is always hidden by either a pose (asana) or pleats on the clothes (when Buddha is standing or lying). Hence, for adherents of canonical Buddhism the aforesaid depiction of Buddha is probably somewhat shocking.

Religious associations of Borobudur Temple with other nearby temples*:* Two major schools, namely Mahayana and Hinayana (Theravada), are found in Buddhism.Mahayana Buddhism is described as the “great vehicle”, in which a holy man stays on the Earth, rather than going to heaven, in order to be able to help. Moreover, in Mahayana Buddhism, it is believed that a savior visits the Earth in the future, whereas Hinayana Buddhism or Theravada is described as a “small vehicle”, in which the Buddha is merely the Buddha himself, without the presence of Bodhisattva. Discussions on structures built during the Hindu–Buddhist era are highly associated with religious context. Revealing the religious background of a

structure requires an observation of the components of the building. According to Soekmono (2005), temples in Indonesia can be classified in two major groups, namely Hindu and Buddhist temples. One of the main features of Buddhist temples is the existence of the stupas. A stupa is a bell-shaped structure of the shrine, which is a unique feature of Buddhist temples. Nevertheless, to explore more about the religious affiliation of a specific structure, we need to focus on the statues, reliefs, sketches, and other ornaments of structures.

The most important argument for the coherence of Barabudur, Mendut and Pawon in my view is the fact — which Van Erp discovered by chance — that the three of them had been lain out along one straight line: 15Pawon on the right shore of the Progo River, 1750 m East of Barabudur, and Mendut 1150 m further East, on the left shore of the Elo River, just upstream from its junction with the Progo.16
Van Erp considered this fact and, as it were, the logically deducible.

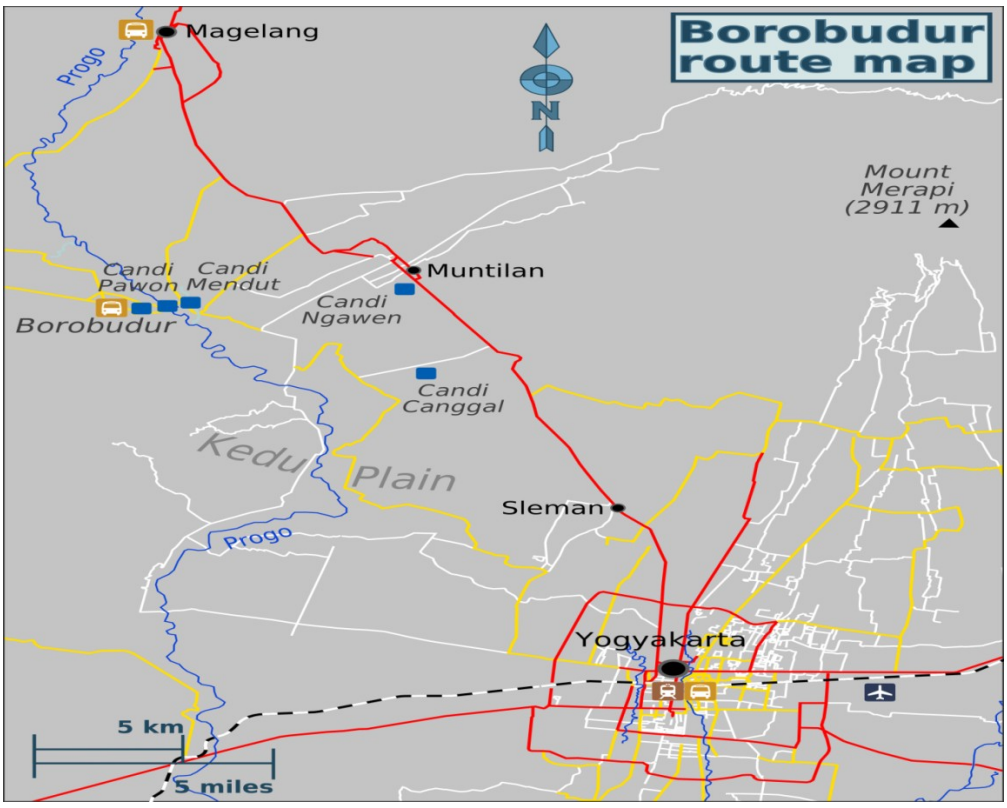


a. for the west, the beginning of the western staircase at Barabudur;
b. for the Suryaloka, the bhavagra — the top level of the Akanistha Heaven;
c. for the east, Candi Mendut; and
d. for the zenith, Candi Pawon.

TRIAD

Borobudur stands in the geographical center of the island of Java, fifteen miles from Yogyakarta, on a plateau that is the caldera of an ancient volcano ringed by the Menoreh mountains. Two sets of twin volcanoes – Merapi and Merbabu to the northeast, Sumbing and Sindoro to the northwest – stand sentinel across the plains. Merapi, the "fire mountain," is active. A legend is told of a heavenly architect who built Borobudur in a single day and laid a curse on anyone who dared ascend his holy shrine. According to Asian art historian, Jan Fontein: "There is a mountain south of Borobudur that when viewed from the monument looks very much like the profile of a man; the nose, lips and chin are clearly delineated. The story goes that the ridge depicts Gunadharma, the architect of Borobudur, who is believed to keep watch over his creation through the ages."

There were only two fleeting references to Borobudur in historical reports of the 18th century. The first recorded visitor to Borobudur was a rebel who fled to the mountain called Bara-Budur in 1709 after leading an attempt to usurp the throne from the Sultan of Matara. The Sultan sent troops who surrounded the mountain, captured him and sent him to be executed.
The next documented visitor to the monument was the heir apparent of Yogyakarta, a defiant young prince who had a reputation for rebellious and depraved behavior. In 1758, he set out to visit the "mountain of a thousand statues" against the advice of a prophecy that royalty who climbed the mountain would die. When he did not return to court, the king sent his men to bring back the wayward son. He was found vomiting blood and soon after died.



But records revealed no consensus on the meaning of the name "Borobudur." Two alternatives were proposed based on Javanese manuscripts from 842 AD: "the mountain of the accumulation of virtue on the ten stages of the Bodhisattva," or "the mountain which is terraced in successive stages." Sir Thomas Raffles, the British governor of Indonesia responsible for the excavation of Borobudur in 1814, thought that "boro" might mean "great" and "budur" might correspond to the more modern Javanese word "buda," interpreted as "The Great Buddha." One Javanese expert indicated that "boro" is related to the word for "monastery," and "budur" is a place name. This would suggest that Borobudur means "Monastery of Budur."Fortunately, because of the native tolerance of religious diversity, many of the monuments of Java were simply abandoned rather than destroyed or defaced, and a cloud of mystery and superstition descended on Borobudur.

The first study on Borobudur was conducted during the Dutch East Indies era by Van Erp and N. J. Kroom,[2] which coincided with the temple's restoration project. Based on the similarities with regard to the architectural style and ornamentation of the three temples it indicated an association between Borobudur Temple and two other temples located nearby, namely Pawon Temple and Mendut Temple. They seem to have been built in the same period, that is, the Sailendra dynasty era. The next

study was conducted by J. L. Moens in the 1950s [3] connected the three temples with Banon Temple, a Hindu temple located near Pawon Temple. Furthermore, it shows that Borobudur, Pawon, and Mendut Temples were all ritual centers of Mahayana Buddhism, whereas Banon Temple was a place for the followers of Siwa-Siddhanta. Another study conducted by IGN Anom imaginarily connected Borobudur, Pawon, and Mendut Temples,showing that the three temples were built along a straight line

Association of the positioning of Borobudur Temple with the four nearby temples

Borobudur Temple is located in the west of Elo River. The temple possesses several meanings related to the belief of Mahayana Buddhism. Moreover, in the past, Borobudur had served as the center of other sacred buildings surrounding it.. Within a distance of 5 km around the temple, there are three other temples affiliated with Mahayana Buddhism, among which are Pawon Temple (1,150 m from Borobudur) and Mendut (2,900 m) . Borobudur, Pawon and Mendut Temples are located in the west of Elo River, and Ngawen is, in fact, located in the east side of the river, which is, in turn, 4 km away from Borobudur . According to previous studies, Borobudur, Pawon, and Mendut Temples are positioned on a straight line and they form a triadic (a group of three) of sacred buildings affiliated to Mahayana Buddhism.

However, according to Totok Roesmanto , the imaginary axis connecting the three temples is not a straight line, and it is interpreted that they were the centers of religious rituals and processions in the past. Furthermore, it is suggested that the three temples were closely associated with Mount Merapi. Nevertheless, further examination of the map shows an addition temple called Ngawen Temple, from which a parallel imaginary axis can also be drawn, connecting it to the other three temples.Thus, on the basis of this fact, it can be interpreted that, in the past, the procession of the religious rituals might begin in Ngawen Temple and end in Borobudur.

Discussions on structures built during the Hindu–Buddhist era are highly associated with religious context. Revealing the religious background of a structure requires an observation of the components of the building. Temples in Indonesia can be classified in two major groups, namely Hindu and Buddhist temples. One of the mainfeatures of Buddhist temples is the existence of the stupas. A stupa is a bell-shaped structure of the shrine, which is a unique feature of Buddhist temples. Nevertheless, to explore more about the religious affiliation of a specific structure, we need to focus on the statues, reliefs, sketches, and other ornaments of structures.

Bodobodur and Merapi Volcano: Borobudur was mysteriously abandoned by the 1500s, when the center of Javan life shifted to the East and Islam arrived on the island in the 13th and 14th centuries. Perhaps Mount Merapi had erupted, choking the rice lands with layers of

volcanic ash. Whatever the cause, the population moved to East Java in a mass exodus, and Borobudur was left behind, its meaning lost in time. Some scholars believe that famine caused by an eruption of Mount Merapi forced the inhabitants of Central Java to leave their lands behind in search of a new place to live. When people once again inhabited this area, the glory of Borobudur was buried by ash from Mount Merapi.

Mountain peaks, according to Buddhist thought, are the place where contact with divine truth may take place. There are 129 volcanoes in Indonesia and smoke can be seen emerging from the mountaintop at least 300 days a year. Mount Merapi, which stands at about 9,551 feet (2,911 meters) tall, lies in one of the world's most densely populated areas and dominates the landscape immediately north of the major city of Yogyakarta, on the island of Java.It is a stratovolcano being the youngest and southernmost of a volcanic chain extending north and northwest, to the Mount Ungaran volcano. The name Merapi could be loosely translated as "Mountain of Fire" from the Javanese combined words "Meru," meaning "mountain," and "api," meaning "fire."Tectonically, Merapi is situated at the subduction zone where the Indo-Australian Plate is sliding beneath the Eurasian Plate. It is part of the Pacific Ring of Fire – a section of fault lines and volcanoes stretching from the western coast of South America, Alaska through Japan and Southeast Asia.

Merapi has been active for about 10,000 years. The volcano's biggest and most devastating eruptions occurred in 1006 and 1930. The eruption of 1006 was so bad that many believe the existing Hindu kingdom in the area was destroyed, as it spread ash over all of central Java. During the 1930 eruption more than 1,300 people were killed."The material has to travel 30 miles [48 km] to get to the surface; there has to be enough propellant force to push them all that way and out.Merapi is the poster child for unstable lava domes," Wunderman said. "The dome on Merapi rests on a steep, unstable environment, and it is easy for pieces to break off and do damage; for example, hot gases can be released and form a superheated, high speed cloud that rolls down the mountain. The volcano is considered sacred by some local people who believe a supernatural kingdom exists atop Merapi, according to Indhanesia.com, an informational website about Indonesia. Every year a priest climbs to the top to make an offering.

Creation

Merapi is very important to Javanese, especially those living around its crater. As such, there are many myths and beliefs attached to Merapi. Although most nearby villages have their own myths about the creation of Mount Merapi, they have numerous commonalities. It is believed that when the gods had just created the Earth, Java was unbalanced because of the placement of Mount Jamurdipo on the west end of the island. In order to assure balance, the gods (generally represented by Batara Guru) ordered the mountain to be moved to the centre of Java. However, two armourers, Empu Rama and Empu Permadi, were already forging a sacred keris at the

site where Mount Jamurdipo was to be moved. The gods warned them that they would be moving a mountain there, and that they should leave; Empu Rama and Empu Permadi ignored that warning. In anger, the gods buried Empu Rama and Empu Permadi under Mount Jamurdipo; their spirits later became the rulers of all mystical beings in the area. In memory of them, Mount Jamurdipo was later renamed Mount Merapi, which means "fire of Rama and Permadi."

Spirit *Kraton* of Merapi

The Javanese believe that the Earth is not only populated by human beings, but also by spirits (*makhluk halus*). Villages near Merapi believe that one of the palaces (in Javanese *kraton*) used by the rulers of the spirit kingdom lies inside Merapi, ruled by Empu Rama and Empu Permadi. This palace is said to be a spiritual counterpart to the Yogyakarta Sultanate, complete with roads, soldiers, princes, vehicles, and domesticated animals. Besides the rulers, the palace is said to also be populated by the spirits of ancestors who died as righteous people. The spirits of these ancestors are said to live in the palace as royal servants (*abdi dalem*), occasionally visiting their descendants in dreams to give prophecies or warnings.

Spirits of Merapi

To keep the volcano quiet and to appease the spirits of the mountain, the Javanese regularly bring offerings on the anniversary of the sultan of Yogyakarta's coronation. For Yogyakarta Sultanate, Merapi holds a significant cosmological symbolism, because it forms a sacred north-south axis line between Merapi peak and Southern Ocean (Indian Ocean). The sacred axis is signified by Merapi peak in the north, the Tugu Yogyakarta monument near Yogyakarta main train station, the axis runs along Malioboro street to Northern Alun-alun (square) across Keraton Yogyakarta (sultan palace), Southern Alun-alun, all the way to Bantul and finally reach Samas and Parangkusumo beach on the estuary of Opak river and Southern Ocean. This sacred axis connected the hyangs or spirits of mountain revered since ancient times—often identified as "Mbah Petruk" by Javanese people—The Sultan of Yogyakarta as the leader of the Javanese kingdom, and Nyi Roro Kidul as the queen of the Southern Ocean, the female ocean deity revered by Javanese people and also mythical consort of Javanese kings.

Abandonment Borobodur lies 28 KM away from the mountain. No one knows what happened to the culture that built the monument. Perhaps Merapi had erupted, choking the rice lands with layers of volcanic ash. Whatever the cause, the population moved to East Java in a mass exodus, and Borobudur was left behind, its meaning lost in time. Borobudur lay hidden for centuries under layers of **volcanic ash** and jungle growth. The facts behind its abandonment remain a mystery. It is not known when active use of the monument and Buddhist pilgrimage to it ceased. Sometime between 928 and 1006, King **Mpu Sindok** moved the capital of the Medang

Kingdom to the region of East Java after a series of volcanic eruptions; it is not certain whether this influenced the abandonment, but several sources mention this as the most likely period of abandonment. The monument is mentioned vaguely as late as c. 1365, in Mpu Prapanca's *Nagarakretagama,* written during the Majapahit era and mentioning "the vihara in Budur".Soekmono (1976) also mentions the popular belief that the temples were disbanded when the population converted to Islam in the 15th century.

The monument was not forgotten completely, though folk stories gradually shifted from its past glory into more superstitious beliefs associated with bad luck and misery. Two old Javanese chronicles (*babad*) from the 18th century mention cases of bad luck associated with the monument. According to the *Babad Tanah Jawi* (or the *History of Java*), the monument was a fatal factor for Mas Dana, a rebel who revolted against Pakubuwono I, the king of Mataram in 1709. It was mentioned that the "Redi Borobudur" hill was besieged and the insurgents were defeated and sentenced to death by the king. In the *Babad Mataram* (or the *History of the Mataram Kingdom*)[4] , the monument was associated with the misfortune of Prince Monconagoro, the crown prince of the Yogyakarta Sultanate in 1757. In spite of a taboo against visiting the monument, "he took what is written as *the knight who was captured in a cage* (a statue in one of the perforated stupas)". Upon returning to his palace, he fell ill and died one day later.

During the Britiash administration from 1811 to 1816, Lieutenant Governor-General Thomas Stamford Raffles was appointed governor who took great interest in the history of Java. On an inspection tour to Semarang in 1814, he was informed about a big monument deep in a jungle near the village of Bumisegoro. He was not able to see the site himself, but sent Hermann Cornelius , a Dutch engineer who, among other antiquity explorations had uncovered the Sewu complex in 1806–07, to investigate. In two months, Cornelius and his 200 men cut down trees, burned down vegetation and dug away the earth to reveal the monument. Due to the danger of collapse, he could not unearth all galleries. He reported his findings to Raffles, including various drawings. Although Raffles mentioned the discovery and hard work by Cornelius and his men in only a few sentences, he has been credited with the monument's rediscovery, as the one who had brought it to the world's attention.

Christiaan Lodewijk Hartmann, the Resident of the Kedu region, continued Cornelius's work, and in 1835, the whole complex was finally unearthed. His interest in Borobudur was more personal than official. Hartmann did not write any reports of his activities, in particular, the alleged story that he discovered the large statue of Buddha in the main stupa. In 1842, Hartmann investigated the main dome, although what he discovered is unknown and the main stupa remains empty.

The Dutch East Indies government then commissioned Frans Carel Wilsen, a Dutch engineering official, who studied the monument and drew hundreds of relief sketches. Jan Frederik Gerrit Brumund was also appointed to make a detailed study of the monument, which was completed in 1859. The government intended to publish an article based on Brumund's study supplemented by Wilsen's drawings, but Brumund refused to cooperate. The government then commissioned another scholar, Conradus Leemans, who compiled a monograph based on Brumund's and Wilsen's sources. In 1873, the first monograph of the detailed study of Borobudur was published, followed by its French translation a year later. The first photograph of the monument was taken in 1872 by the Dutch-Flemish engraver Isidore van Kinsbergen.
Appreciation of the site developed slowly, and it served for some time largely as a source of souvenirs and income for "souvenir hunters" and thieves. In 1882, the chief inspector of cultural artifacts recommended that Borobudur be entirely disassembled with the relocation of reliefs into museums due to the unstable condition of the monument. As a result, the government appointed Willem Pieter Groeneveldt, curator of the archaeological collection of the Batavian Society of Arts and Sciences,[38] to undertake a thorough investigation of the site and to assess the actual condition of the complex; his report found that these fears were unjustified and recommended it be left intact.

Borobudur was considered as the source of souvenirs, and parts of its sculptures were looted, some even with colonial-government consent. It is said that in 1896 King Chulalongkorn of Siam visited Java and requested and was allowed to take home eight cartloads of sculptures taken from Borobudur. These include thirty pieces taken from a number of relief panels, five buddha images, two lions, one gargoyle, several kala motifs from the stairs and gateways, and a guardian statue (dvarapala). Several of these artifacts, most notably the lions, dvarapala, kala, makara and giant waterspouts are now on display in the Java Art room in The National Museum in Bangkok.

Restoration
Borobudur attracted attention in 1885, when the Dutch engineer Jan Willem IJzerman Chairman of the Archaeological Society in Yogyakarta, made a discovery about the hidden foot. Photographs that reveal reliefs on the hidden foot were made in 1890–1891. The discovery led the Dutch East Indies government to take steps to safeguard the monument. In 1900, the government set up a commission consisting of three officials to assess the monument: Jan Lourens Andries Brandes, an art historian, Theodoor van Erp [nl], a Dutch army engineer officer, and Benjamin Willem van de Kamer, a construction engineer from the Department of Public Works.
In 1902, the commission submitted a threefold plan of proposal to the government. First, the immediate dangers should be avoided by resetting

the corners, removing stones that endangered the adjacent parts, strengthening the first balustrades and restoring several niches, archways, stupas and the main dome. Second, after fencing off the courtyards, proper maintenance should be provided and drainage should be improved by restoring floors and spouts. Third, all loose stones should be removed, the monument cleared up to the first balustrades, disfigured stones removed and the main dome restored. The total cost was estimated at that time around 48,800 Dutch guilders.
The restoration then was carried out between 1907 and 1911, using the principles of anastylosis and led by Theodor van Erp. The first seven months of restoration were occupied with excavating the grounds around the monument to find missing Buddha heads and panel stones. Van Erp dismantled and rebuilt the upper three circular platforms and stupas. Along the way, Van Erp discovered more things he could do to improve the monument; he submitted another proposal, which was approved with the additional cost of 34,600 guilders. At first glance, Borobudur had been restored to its old glory. Van Erp went further by carefully reconstructing the *chattra* (three-tiered parasol) pinnacle on top of the main stupa. However, he later dismantled the *chattra*, citing that there were not enough original stones used in reconstructing the pinnacle, which means that the original design of Borobudur's pinnacle is actually unknown. The dismantled *chattra* now is stored in Karmawibhangga Museum, a few hundred meters north from Borobudur.
Due to the limited budget, the restoration had been primarily focused on cleaning the sculptures, and Van Erp did not solve the drainage problem. Within fifteen years, the gallery walls were sagging, and the reliefs showed signs of new cracks and deterioration. Van Erp used concrete from which alkali salts and calcium hydroxide leached and were transported into the rest of the construction. This caused some problems, so that a further thorough renovation was urgently needed.

...nature takes a toll
But during the 19th century, as Borobudur's past became more clear, its future grew much less certain. The climate of Java is particularly ruthless to man-made structures. In the words of Professor Soekmono, former head of the Archeological Service of Indonesia: "For over a thousand years, the rigours of the tropical climate have probed the latent weaknesses of the edifice. Sudden changes of heat and cold between day and night, where temperatures may vary by 40 degrees Fahrenheit in twenty-four hours, cause stones to crack. But the worst havoc has been caused by the heavy rains, over eighty inches a year on average, with torrential downpours of up to half an inch in five minutes. They overwhelmed the inadequate drainage system, percolating down into the central core where they washed away the earth and weakened the foundations."

"Moisture on the stones had also corroded many of the beautifully carved

reliefs and favored the growth of disfiguring patches of mosses and lichens. The terrace walls sagged and tilted at crazy angles and the floors sloped inwards. Had the lower terrace walls collapsed, the whole colossal structure would have come tumbling down in a great slithering avalanche of earth and masonry."

Nature itself was destroying the monument, literally tearing Borobudur apart. Despite repeated efforts at restoration throughout the 19th and early 20th centuries, major decay and structural disintegration plainly threatened Borobudur with inevitable and irreparable collapse. Several interesting suggestions for protection of the monument were made during that time. One of the preservationists suggested that Borobudur be covered by a giant umbrella to keep the rain off. Another proposal was to demolish the entire edifice and deposit the reliefs in a museum.

In 1907, Theodore Van Erp, a Dutch engineering officer, led a major restoration project. He rebuilt the crumbling stupas and heaving floors of the upper terraces, cleaning the sculptures of moss and lichen. But after four years, the limited funds were exhausted before work could begin on the lower galleries, and the basic problem of drainage had not been solved. Carvings were rapidly disintegrating; walls were crumbling. By 1948, when the Republic of Indonesia came into existence, Borobudur was on the brink of ruin. According to Soekmono, [5]"Deterioration was so widespread all over the monument that no partial restoration could effectively ensure its safeguard. Since the Indonesian people were determined to pass on the best of their cultural heritage to forthcoming generations, drastic but deliberate action was called for in the form of a gigantic project." But it would be several decades before attention would again turn to Borobudur.
Little is known about the early history of Borobudur except that it was built some time between AD 750 and 850, during the Sailendra Dynasty. A huge workforce must have been required to hew, transport and carve the 60,000 cubic metres of stone in constructing the temple, but the details remain as vague as the monument's name, which possibly derives from the Sanskrit words ‘Vihara Buddha Uhr’, meaning Monastery on the Hill’.

The three temples at Borobodur belong to the Mahayana Buddhism. The details of the cults practised are unsure, but a relationship certainly existed between the temples and the proclaimed divine nature of the kings who ordered their construction. In this connection, a possible, symbolic relationship between the three monuments was investigated in details by Moens. In this controversial but anyhow scholarly work, the idea is that the temples were connected by a “magical birth” ritual, in which the monarch’s consecration occurred both as the Buddha and as King. Moens proposed a ritual based on an analogy with the sun path in the sky in one day, and thus endowed with three main “stations”: east, zenith, and west. To these steps corresponded for the west, the beginning of the western staircase at Borobudur; for the east, Mendut; and for the zenith, Pawon.

Role of the moon: It is worth mentioning that the role of the moon is quite relevant in Buddhism, since festivals and recurrences associated with Buddha's life are timed by the full moon. As is well known, in the course of a 18,6 years cycle the maximal declination of the Moon in her monthly cycle undergoes a slow variation from a minimum to a maximum, equal to the obliquity of the ecliptic □□minus/plus the obliquity of the earth-moon plane (□=5° 9') with respect to the ecliptic. This leads to a minor standstill at declination □□□□and a maximal standstill at declination □□□. In 800 AD the obliquity of the ecliptic was about 9' greater than today so □=23° 39' and the two standstills correspond to declinations 28° 48' and to 18° 30' respectively. The last matches impressively well the orientation of Pawon, while the first is not far (less than two degrees in declination, corresponding to less than 2 degrees also in azimuth) from that of Mendut (parallax corrections are negligible at these latitudes).

Since the minor standstill of the Moon is always mimicked by the sun two times a

year, it is impossible to distinguish it from a solar orientation in the case of a single
building. However, the coincidence of two buildings possibly related to the two
standstills is, to say the last, impressive. In this respect it is important to remember that precise azimuths for the major standstills of the Moon are very difficult to individuate, and major standstills lunar orientations should always be understood as aimed to the full moon closest to the solstice, which always attains a declination close to the extremal one in the years of the standstills. The choice of orientation to the extrema of the moon might thus have arisen from calendrical reasons.[6]

Moens*:* Confirmed that the temple triad of Barabudur, Mendut and Pawon dates from the period of the Shailendra dynasty, [1,3] which in close cooperation with the kings of the Sanjaya dynasty dominated Central Java for nearly two centuries, is no longer liable to doubt since the explorations of Van Erp and Krom. In his extensive Barabudur-monograph, Van Erp called the three temples "...a triad that according to (their) architecture and ornamentation derive from the same time period." [7]This observation of course concerns the style of the temples as we are familiar with today, that is to say following the renovations and extensions which must have been executed by the end of the ninth century when Shailendra hegemony in Java came to an end.

VESAK DAY

The tranquility ambiance of Mendut temple its monastery does not merely come from its magnificent building and garden. But also religious tones that seeded every time Buddhists come. Every year, Buddhist priests come to celebrate the Vesak or Buddha day. A day to commemorate the birth, enlightenment, and death of Buddha.

One sacred ritual done on Buddha day is firing fire. This ritual is set using fire brought from afar. Afterward, the fire is brought into the yard. Then, the sound of the holy parittas read will be filling up the noise. Fast forward, the priests round over the temple, making the temple packed in orange. Finally, the fire torch is set inside the temple.

This ritual is done for nothing but to gain a blessing from the goddess. The holy parittas read by the Buddhists speaks for freedom from harm. Not only for Buddhists themselves, but also for the Buddha, country, and everyone.

Waisak Procession from Mendut Temple to Borobudur-

Mendut shown on Borobudur SW side

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Chapter 6

More about Mendut Temple- Dr Uday Dokras Phd Stockholm

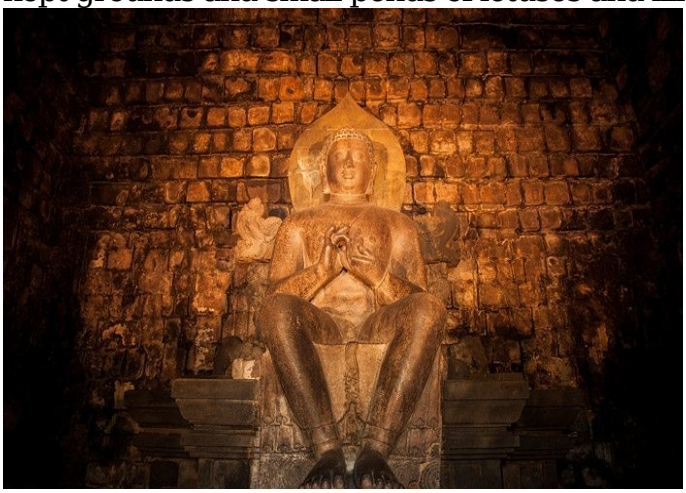
This Buddhist holistic place, the **Mendut temple** is situated in located in Mendut village of Mungkid subdistrict in Magelang, Central Java located on Jalan Mayor Kusen, Mungkid City, Magelang Regency, Central Java. The temple was built around early ninth century AD during the reign of King Indra of Sailendra dynasty. Mendut temple was discovered in 1836. The entire structure was found, except the roof that had already crumbled. It is located 3 km from Borobudur Temple and about 38 km to the northwest of Yogyakarta. It is not merely a place for religious practices, but also a gem where Buddhist philosophies are seen carved in relief; all together laid on an enormous 26.4 meters tall building. At a glance, Mendut temple might look similar to other Buddhist temples. But as soon as people step in, its special characteristics will hard not to notice. Three big Buddha sculptures and fable reliefs make the temple looks different from others. Besides, as it becomes a site for Buddhist priests to worship.

Mendut Temple and Monastery

Today it is on the itinerary for one of the places for us to visit during our upcoming meditation and wellness retreat in Indonesia but the truth is that this place has been a meditation centre and a rest-house or hostel for Buddhist monks since centuries. It is located a little over 3 kms from Borobudur this temple may appear insignificant to the mighty Borobudur but is home to an exquisitely carved 3 meter high statue of Buddha. Unlike most statues of Buddha that are usually carved in the

lotus position or in a laying down position, this Buddha is seated, western-style, majestically in a throne with both feet firmly placed on the ground.
A massive, beautiful, sprawling ficus tree stands next to the temple, a quiet symbol of endurance and patience, two essential qualities on the spiritual path.

Next to the Mendut temple is the Mendut Buddhist Monastery which has beautifully kept grounds and small ponds of lotuses and lilies.

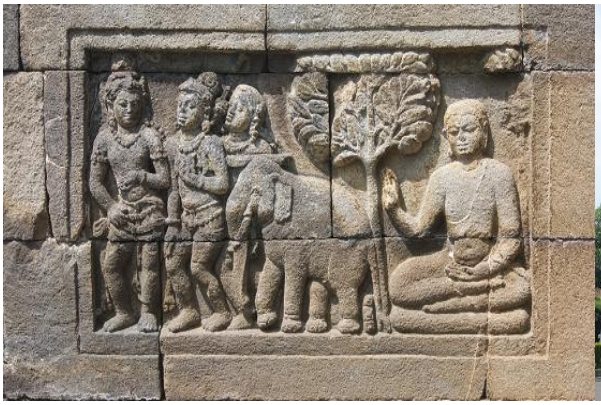


Buddha statue in Mendut Temple in Central Java

Mendut Temple, First Legacy of the Sailendra Dynasty
Java Island is the center of the discovery of the temples of various kingdoms in the past The internal structure of this Buddhist temple is made of bricks, but the outer walls are made of andesite stone. This building has a basement, above which there are alleys that surround the temple. Around Mendut Temple, there are 48 small stupas.

According to historians, Mendut Temple has a close connection with Pawon Temple, because Mendut Temple, Pawon Temple and Borobudur Temple are located in a straight line from north-south. Even now it is still a mystery why the three temples are connected in a straight line? It is very possible that this has a purpose, for example associated with astrology or others. Another question is how to determine the location of the temples in the past? What technology was used at that time?

The positions of Candii Borobudur, Candi Pawon and Candi Mendut are in this line following the constellation Orion Alnitak, Alnilam, Mintaka (Orion Belt). Maybe after this of course we will ask. How did in the past understand the relationship between the three temples and the constellation Orion? Why do the three temples stand in the same slanted line as the constellation Orion? Everything is still a mystery. Similar to the mystery of the various reliefs in the Borobudur Temple. Likewise, the mystery of how the Prambanan temples were made in the past with a high level of complexity. What kind of technology existed in the past?



Relief of Mendut Temple ***///Stairs to the top floor of Mendut Temple***

The temples were built by the kings of the Syailendra Dynasty who were known as the family of temple builders in the archipelago. Other temples that are also close to Borobudur Temple are Canggal Temple / Mount Wukir and Losari Temple around Salam, Asu Temple, Lumbung Temple, Selagriya Temple, Ngawen Temple and Sari Temple around Muntilan.

There is still one more temple, namely Banon Temple which has Hindu characteristics. In this temple, there are found statues of the main Hindu gods in good condition, namely Shiva, Vishnu, Brahma, and Ganesha. Unfortunately, the existence of Banon Temple is difficult to reconstruct because there are very few stones found in Banon Temple. The statues of Banon Temple during the Dutch East Indies era were moved to Batavia and stored at the National Museum of Indonesia.

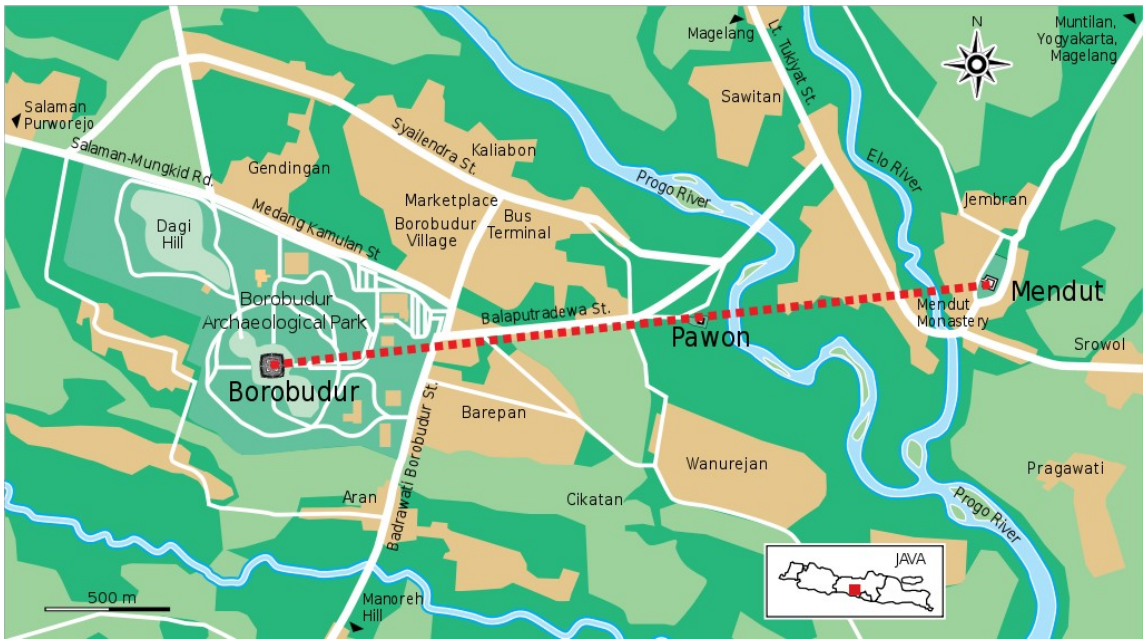
Dating of the Site

Until now, it is not clear when Mendut Temple was built. A historian J.G. de Casparis estimates that Mendut Temple was built by the first king of the Syailendra dynasty in 824 AD So Mendut Temple is thought to be the first temple built by Wangsa Syailendra. Dutch orientalist and indologist. J.G. de Casparis also estimates that Mendut Temple is older than the age of Barabudhur Temple. This historian's estimate is based on the Karangtengah inscription (824 AD) which states in the inscription that King Indra had made a sacred building called Wenuwana.

The ruins of Mendut Temple were first discovered in 1836. The discovery at that time was the base and building of the temple but the top and roof were not visible. Then in 1897-1904, the Dutch East Indies Government carried out renovations in several parts including the roof of the temple so that it displayed a shape that was almost the same as it is today, although not yet perfect.

Physically, Mendut Temple building which stands on a rectangular foundation has a height of 26.40 m. The position of the Mendut temple land is quite high, also about 2 meters from the surrounding height. There are many reliefs on the walls of the base of the temple with 31 panels in the form of dioramas of various stories. Relief forms in the form of carvings of people, animals, flowers and tendrils. To reach the top of the temple through the date which is on the west side which has the entrance to the room in the temple. The roof of the viewer is the same height and blends with the roof of the temple body. Mendut Temple does not have a gate. The walls of the stairs are fanel reliefs depicting various Buddhist stories. At the beginning of the date there is a pair of dragon heads whose mouths are wide open. On the underside of the dragon's head was a panel with the image of a dwarf.

The plan of temple's base is square, and measures 13.7 metre on each side, with the base level 3.7 metre above the ground . The 26.4 metre tall temple is facing northwest. The stairs projecting from the northwest side square elevated base is adorned with Makara statue on each sides, the side of the stairwall carved with bas-relief of Jataka fable narrating the animal story of Buddhist teaching. The square terrace surrounding the body of the temple was meant for *pradakshina* or circumambulating ritual, walking clockwise around the temple. The outer walls is adorned with bas-reliefs of Boddhisattvas (Buddhist divinities), such as Avalokitesvara, Maitreya, Cunda, Ksitigarbha, Samantabhadra, Mahakarunika Avalokitesvara, Vajrapani, Manjusri, Akasagarbha, and Boddhisattvadevi Prajnaparamita among other buddhist figures. Originally the temple had two chambers, a small chamber in the front, and the large main chamber in the center. The roof and some parts of the front chamber walls are missing. The uppermost part of the roof is missing, it supposed to have a stupa pinnacle with size and style probably just like the one in Sojiwan temple. The inner wall of front chamber is adorned with bas-relief of Hariti surrounds by children, Atavaka on the other side, Kalpataru, also groups of devatas divinities flying in heaven.

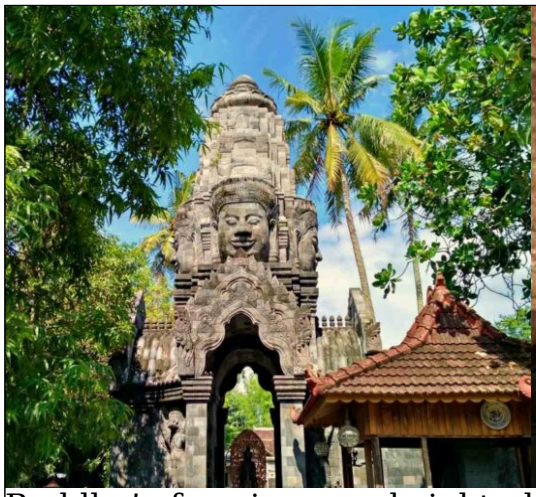


Location three Buddhist temples, Borobudur-Pawon-Mendut, in one straight line across Progo River.

The main room has three carved large stone statues. The 3 metres tall statue of Dhyani Buddha Vairocana was meant to liberate the devotees from the bodily karma, at the left is statue of Boddhisatva Avalokitesvara to liberate from the karma of speech, at the right is Boddhisatva Vajrapani to liberate from karma of thought.

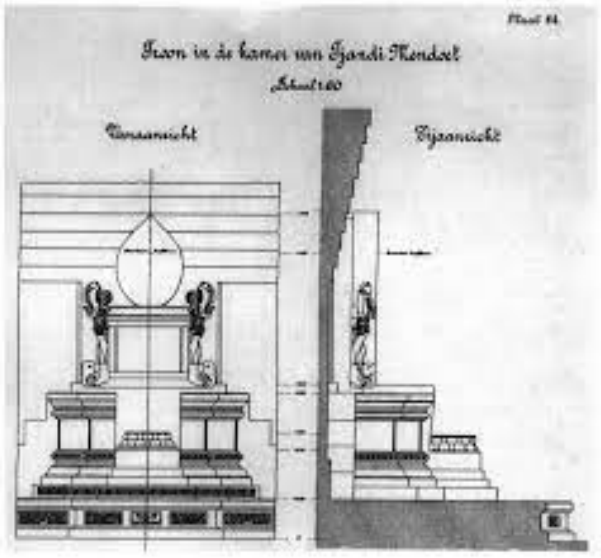
MENDUT TEMPLE GIANT SCULPTURES

The giant sculpture of Vairocana Buddha is the most outstanding attribute of the Mendut temple. In Buddhism, Vairocana represents emptiness. Which also means, no one lives eternally. The sculpture is laying in the main temple. When people come in, it appears eminently. Giving a pictorial of Buddhist holistic belief.



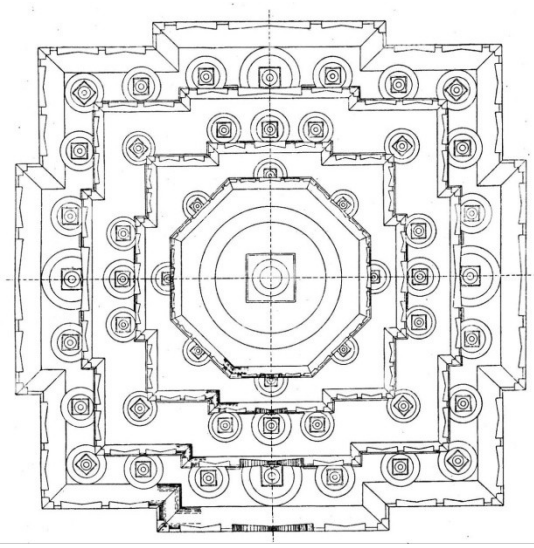

Buddha’s face is carved right above the gate/ / Buddha statues in the main temple
Next to the Statues of Buddha is a Bodhisattva in Chandi Mendut,

Aside from Vairocana, there are sculptures of Avalokitesvara and Vajrapani. This figure is two of three Buddha’s protective goddess which own different philosophies. While Avalokitesvara represents the compassion of all Buddha. Vajrapani represents a pictorial of Buddha’s guardian.
Here, Avalokitesvara visualized with a lotus in her palm and her irresistible soothing face. A representation of a person living in harmony. While Vajrapani has a reversed figure. As a protector of Buddha, Vajrapani owns a scary face. It has big eyes and two jaws in the mouth. Showing his big energy to protect the Buddha. What a deep symbol carved in arts.



LEFT----TARA SITTING ON A THROWN IN KALASAN TEMPLE
RIGHT--- BUDDHA IN THE MENDUT TEMPLE ALSO SITTING IN A WESTERNISED POSITION

According to GHOSH, Mallar, Development of Buddhist Iconography in Eastern India: A Study of Tara, Prajňás of Five Tathdgatas and Bhrikutï. (New Delhi: 1980)Munshiran Manoharlal. The symbolic meanings assigned to the sitting posture and the throne seem to support the identification proposed by him that the bhadrâsana stands for "sovereignty,



RELIEFS AND CARVINGS
Some Stories in the Reliefs of Mendut Temple

The wall in the corbelled roof's interior is adorned with relief of Kuwera or Avataka on the north and Hariti on the south. Kuwera is a man-eating giant who repents after seeing the Buddha. The giant changed into god of fortune and guardian of children. Kuwera is married to Hariti, who also used to be a man-eating giant. As her husband does, Hariti repents after seeing the Buddha and becomes a guardian of children. This relief of Kuwera and Hariti is found in most temples of Tantrayana Buddhism such as Sewu, Banyuniba and Kalasan.

In the relief Kuwera is depicted sitting on a bench among children at play. Under the bench, there is a money pouch. Money pouch is characteristic of Kuwera as the god of fortune. Hariti relief portrays identical atmosphere. Hariti is sitting on a bench with a child on her lap among children at play.

The temple's body carries relief friezes depicting the life of Buddha. The southern wall is adorned with relief of Bodhisattva Avalokitesvara, depicting the Buddha sitting on lotus throne under the shade of kalpataru tree. To his right is Dewi Tara sitting on lotus throne and to his left is another woman who is also sitting on lotus throne. Two clouds hang over them, each with a figure of man reading a book. To their left and right sides, there are stone pillars with a dwarf on top bearing something. Buddha is facing a pool full

of lotus flowers. The pool's water comes from teardrops of the Buddha who is sad to think of the miseries of human beings in the world. Two women are depicted to appear amid lotuses in the pool.

The eastern wall carries relief sculpture of Bodhisattva, depicting the Buddha as a figure with four arms standing on an object that looks like a linga. He is wearing imperial clothes and his head emanates rays of divine light. A book is on his rear left hand, prayer beads on his rear right hand, while the two front hands are in varamudra or blessing position. To his left, there is a jug containing a lotus flower.

The northern wall is embellished with relief sculpture depicting Dewi Tara sitting on lotus throne flanked by two men. Tara is described in this sculpture as a goddess with eight arms. The four left hands hold an oyster, wajra, cakra, and prayer beads, while the four right hands hold a saucer, axe, stick, and book.

The west or front wall carries relief sculpture of Sarwaniwaranawiskhambi standing under an umbrella wearing imperial clothes.

Sarwaniwaranawiskhambi:

Sarwaniwaranawiskhambi: *The story of the past life of Buddha Gotama has become one of the most important discussions in Buddhist philosophy. The stories of his life are recorded in the Pāli Canon mainly in the Jātaka texts (birth stories of the Buddha). Jataka stories have obtained popularity in ancient times in Buddhist countries such as India, Sri Lanka, Myanmar, Thailand and even Indonesia. Its reputation which appeared in many Jātaka stories is being put into Buddhist art and architecture. In Indonesia, Jataka stories are found among reliefs on the walls of Candi Buddhist, such as Candi Sojiwan, Mendut and Borobudur.*

However, at present time there are no books that try to discuss Jātaka story carved on the walls of these temples thoroughly and systematically. This research tries to identify reliefs of Jātaka found in three Candi that are located in Central Java namely Candi Sojiwan, Mendut and Borobudur. The theory used in this research is Semiotics theory of Charles Shanders Pierce. This theory is used to interpret the signs contained in the reliefs of the Candi by using triangle of meaning ie., interpretants (researchers), objects (reliefs on the three Candis) and signs. Within the sign there are three things being analized namely icons, indexes and symbols. In relation to the icon, the researchers identify the images on the relief as they are. Then, in indexes, the researchers interpret images that have been identified in accordance with the existing context. For example, the icon that reveals the images of humans, crowns, and jewelry show that someone who wore the crown and jewelry was identified as a high standing one or even a king. Because these three Candis are Buddhist temples, the symbols given are of course tend to be of Buddhist context. When certain reliefs are identified to have represented certain Jātaka stories, they are considered objects that symbolize the Jātaka story. In this research there are 109 panel reliefs from three Candis that have been successfully studied. Among 109 panel reliefs there are 38 panels indentified as representing Jātaka stories. In Candi Sojiwan, 20 panel reliefs are found, but only 8 panels have been identified as telling the story of Jātaka.

1. *230 panel reliefs in Borobudur temple are then reduced to 44 panels and 15 are successfully identified to have links to Jātaka stories.*

2. *Meanwhile, from 45 panels, 15 panel reliefs in Candi Mendut have been found to represent the Jātaka story.*

The interior and exterior walls of the temple are things the eyes can’t escape. Each relief and carvings has its own story. In one corner, several carvings of heavenly creatures are drawn beautifully. Showing figures serving the Gods. The two carvings of monkey and eagle didn’t miss the spot. Carve and telling their story on the temple wall. Moving to the other side, a relief of Panchatantra carved. It is the same motif as found in Indian literary products. The relief tells the story of an Indian scholar who teaches five wisdom of life. In the story, Visnusarma, the scholar, was the one who taught three boys five books. Each of the books tells the rules of good livelihood drawn as fables.

The oldest version of Panchatantra is written as text. Then, Buddhists tried to tell the stories in a unique way by carving in the temples. Every different story is frame together with another. In Buddhism, such a story is called Kathamuka, the frame story.

Dharmabuddhi and Dustabuddhi.

In one part of the Mendut temple fanel, there is a relief depicting the story of Dharmabuddhi Holy thoughts)and Dustabuddhi (evil thoughts) . This story is about two friends, children of merchants. One day Dharmabuddhi found money and told his friend Dustabuddhi. They keep the money under a tree. When they need money, Dharmabuddhi takes some of the money and divides it in half. The always suspicious and dissatisfied Dustabuddhi took all the remaining money. He reversed the facts by accusing Dharmabuddhi of taking all the money and bringing it to court. Fortunately the judge was able to prove that Dustabuddhi was found guilty and convicted.

The story of Dharmabuddhi and Dustabuddhi in Mendut Temple

Another story from the relief at Mendut Temple is that two parrots are different in their behavior because one is educated by a thief. While one by a priest

Reliefs on the walls of Mendut Temple

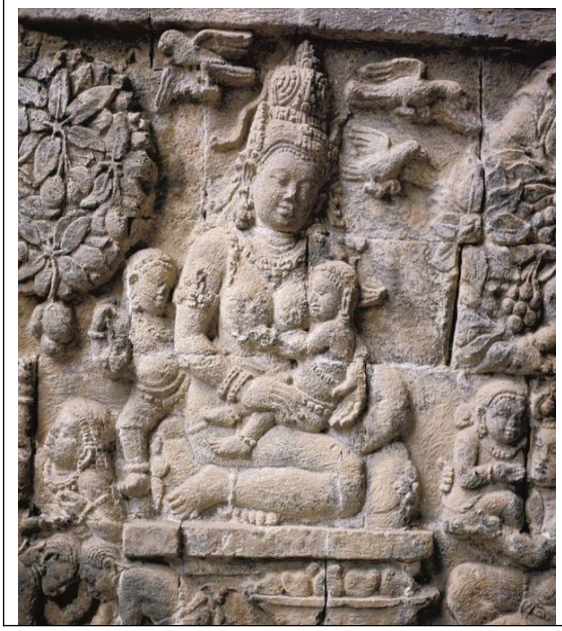
Guard Statue on the stairs of Mendut Temple

	According to a Thervadin oral story in southeast Asia, Hariti was a yakka woman who lived in Rajgir. She was steadfast in ethics, mindfulness, and wisdom. Her husband was the counselor of the kubera of Gandhara or sometimes king of yakkas. She had no children. In search of experience of motherhood, she started

Dharmabuddhi and Dustabuddhi

Hārītī is both a revered goddess and demon, depending on the Buddhist tradition. She is one of the Twenty-Four Protective Deities of Mahayana Buddhism.

In her positive aspects, she is regarded for the protection of children, easy delivery and happy child rearing, while her negative aspects include the belief of her terror towards irresponsible parents and unruly children.

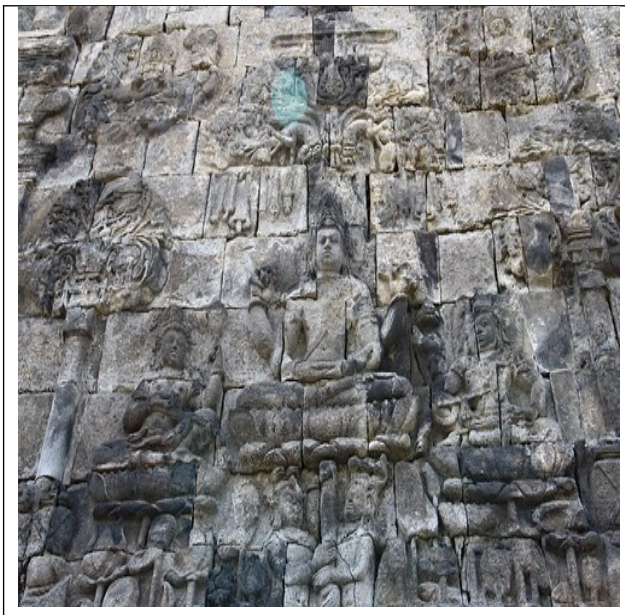


kidnapping new born babies from Rajgir where the Buddha Shakyamuni was staying. Thus, victim mothers from Rajgir pleaded to the Buddha. Buddha went to the cave of Hariti during his alms round and hid one of her kidnapped new born babies in his begging bowl. Hariti was devastated when she found out. After futilely searching for that infant, she finally appealed to the Buddha. The Buddha revealed how she was suffering from the loss of one child whereas hundreds of other mothers and families were still suffering from the loss of their beloved children. Hariti acknowledged that their suffering was greater than her. She returned all the kidnapped babies to their mothers and again became steadfast in the Dhamma. The Buddha taught her Dhamma rituals associated with the upbringing of a child. Hariti started.experiencing universal friendship and compassion to all beings. Hariti declared that she is no longer a woman with no children, she is now the mother of all beings. Hariti promised the Buddha that she would protect and love children of all realms of existence. She practiced and taught the four Brahma viharas to all worldly beings. The Buddha called her the Jagatmata or mother of all realms, the mother of all humans who eliminate or destroy (hari)(-ti) obstacles from their life.

According,to another Mahayanist Sthavirvadin myth, Hārītī was originally a rākṣasī of Rajgir at the same time that Gautama Buddha also lived there. She had hundreds of children of her own, whom she loved and doted upon, but to feed them, she abducted and killed the children of others. The bereaved mothers of her victims pleaded to the Buddha to save them. So, the Buddha stole the youngest of her sons, Piṅgala (in a variant version, the youngest daughter), and hid him under his rice bowl. After having desperately searched for her missing son throughout the universe, Hārītī finally appealed to the Buddha for help.

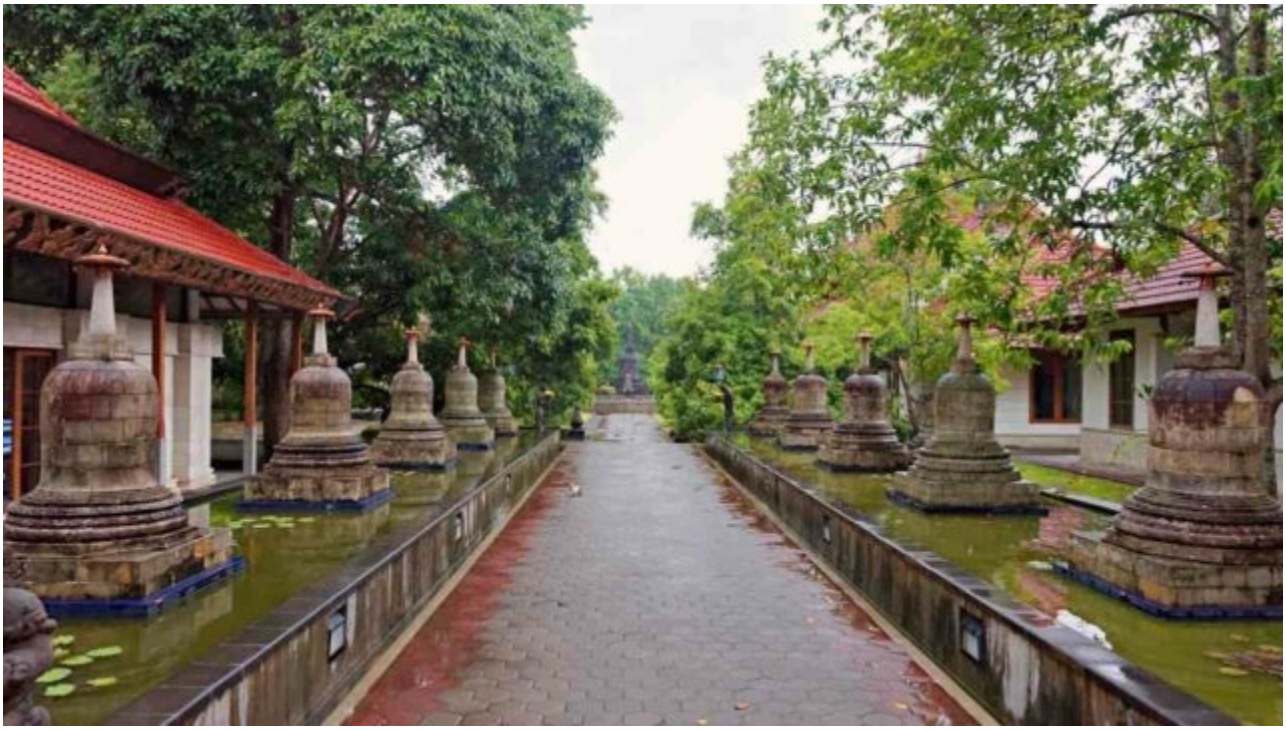
The Buddha pointed out that she was suffering because she lost one of hundreds of children, and asked if she could imagine the suffering of parents whose only child had been devoured. She replied contritely that their suffering must be many times greater than hers. She then vowed to protect all children, and in lieu of children's flesh, she would henceforth only eat pomegranates. Henceforth Hārītī became the protector of children and women in childbirth. In exchange, the Buddha gave her bodhi, which enabled her to withstand black magic and evil powers, and gave her the facility to cure the sick

The bas-relief of Hariti on inner northern wall of Mendut	

	Rear, eastern wall. Bas-relief of *Bodhisattva Avalokitesvara*, depicting the Buddha sitting on lotus throne under the shade of *kalpataru* tree. To his right is *Dewi Tara* sitting on lotus throne and to his left is another woman who is also sitting on lotus throne (some interpretations say the *Bodhisattva Avalokitesvara* is flanked by two other deities believed to be *Boddhisatva Maitreya* and *Boddhisatva Samantabhadra*). Two clouds hang over them, each with a figure of man reading a book. To their left and right sides, there are stone pillars with a dwarf on top bearing something. Buddha is facing a pool full of lotus flowers. The pool's water comes from teardrops of the Buddha who is sad to think of the miseries of human beings in the world. Two women are depicted to appear amid lotuses in the pool. In the site's storyboard, *Bodhisattvadevi Pradnyaparamita* (*Dewi Prajnaparamita*) is mentioned among the Buddha figures."

THE MONASTERY

The Buddhist monastery is located right beside the complex of Mendut temple. It's a place for Buddhist tourists to pray and worship after touring around the temple. Inside, people are free to glimpse the dorm and meditation halls. A spacious green garden also lays in between. With stunning sculptures in every corner of the area.

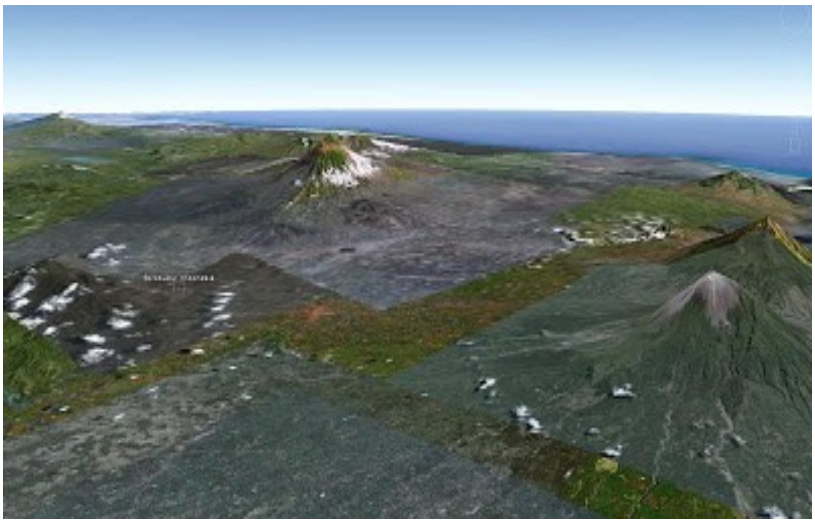


The Buddhist monastery inside the temple complex. Img: Arya

The most outstanding sculpture in the monastery is the reclining Buddha. A giant sculpture that portrays Buddha in his sleeping position. It looks much like Wat Pho, a legendary statue in Thailand. In Buddhism, reclining Buddha speaks for a story of Buddha's last illness before going to Parinirvana.

In addition to the sculptures, the monastery owns two meditation halls. Green trees and small lotus pounds surround the hall, making a view that eyes can't escape. Also, for tourists coming for a longer visit, a room is available for rent. It has a small river nearby. Offering a calm, harmonious reverie of nature.

Chapter 7
Borobudur as Buddhist Mandala ?



Mandala in Borobudur

The Buddha says:—*“*
They who speak much are blamed. They who speak a little are blamed. They who are silent are also blamed. In this world there is none who is not blamed.”

Note: In 2020 we uploaded an article titled”Borobudur Temple as a Mandala”This is additional material to supplement those ideas

Borobodur as the Ultimate Buddhist Temple

Borobudur, was built during over a half century by the Sailendra Dynasty after Mahayana Buddhism was introduced from the Srivijaya Kingdom of South Sumatra in the early half of the 8th century AD. Many Buddhism images and reliefs in Borobudur were made referencing Gandavyuha and Vajrayana/Esoteric Buddhism from Sri Lanka and East India. Unlike Angkor it is not Converted but originally Buddhist.

The stepped pyramid shape without an inner space as found at Borobudur is found in neither India nor Sri Lanka. And there are no stupas with that similar shape in Southeast Asia prior to Borobudur. Similar shaped monuments are found only in South Sumatra etc. This type of monument, originating from the mountain religions of Megalithic culture that predated the introduction of Buddhism continued through the Historical Age. Borobudur can be seen as a massive monument of this origin, decorated in Buddhism style.

Borobudur in Java

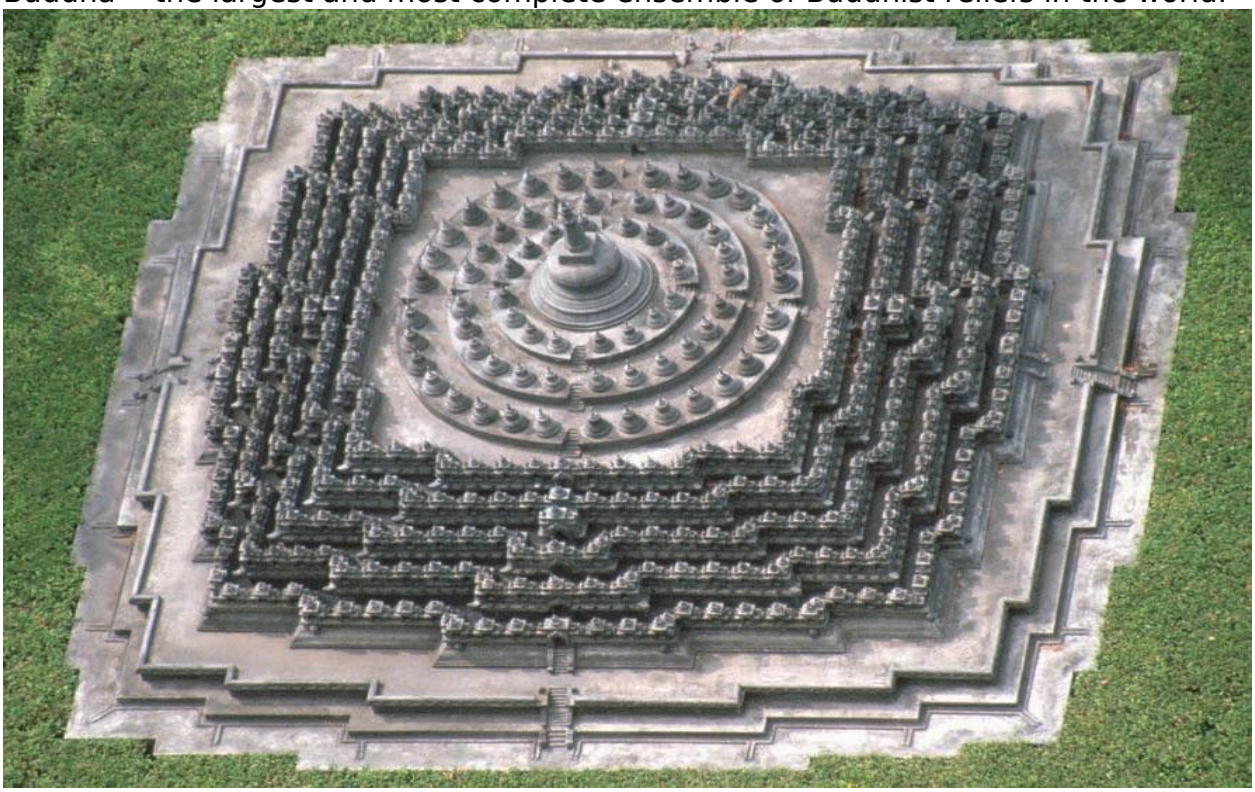
Borobudur is a step pyramid, built around a natural hill, comprised of a broad platforms topped by five walled rectangular terraces, and they in turn are topped by three round terraces. Each terraces is outlined with ornaments and statues and the walls are decorated with bas reliefs. More than two million blocks of volcanic stone were carved during its construction. Pilgrims have traditionally walked around the monument in a clockwise manner moving up each of the five levels, and in process covering five kilometers.

Unlike most temples, Borobudur did not have actual spaces for worship. Instead it has an extensive system of corridors and stairways, which are thought to have been a place for Buddhist ceremonies. Borobodur also has six square courtyards, three circular ones, and a main courtyard within a stupa at the temple's peak. The entire structure is formed in the shape of a giant twirling staircase, a style of architecture from prehistoric Indonesia.

Borobudur is a three' dimensional model of the Mahayana Buddhist universe. The climb to the top of the temple is intended to illustrate the path an individual must take to reach enlightenment. At the main entrance on the east side, visitors can not even see the top. Scholars believed this was intensional. At the top was the ideal of Buddhist perfection, the World of Formlessness. The architecture and stonework of this temple has no equal. And it was built without using any kind of cement or mortar!

Borobudur resembles a giant stupa, but seen from above it forms a mandala. The great stupa at the top of the temple sits 40 meters above the ground. This main dome is surrounded by 72 Buddha statues seated inside perforated stupa. Five closed square galleries, three open circular inner terraces, and a concentric scheme express the universe geometrically. At the center of the top of the temple is a beautifully shaped stupa which is surrounded by three circles of smaller stupas that have the same shape. There are 72 of these, each with a Buddha statue inside. Touching them is supposed to bring good luck. Unfortunately many had their heads lopped off by 19th century explorers looking for souvenirs. The 72 small latticed stupas look like perforated stone bells. The temple is

decorated with stone carvings in bas-relief representing images from the life of Buddha— the largest and most complete ensemble of Buddhist reliefs in the world.



Borobudur is both a shrine to the Lord Buddha and a place for Buddhist pilgrimage. The ten levels of the temple symbolize the three divisions of the religion's cosmic system. As visitors begin their journey at the base of the temple, they make their way to the top of the monument through the three levels of Budhist cosmology, Kamadhatu (the world of desire), Rupadhatu (the world of forms) and Arupadhatu (the world of formlessness). As visitors walk to the top the monument guides the pilgrims past 1,460 narrative relief panels on the wall and the balustrades.

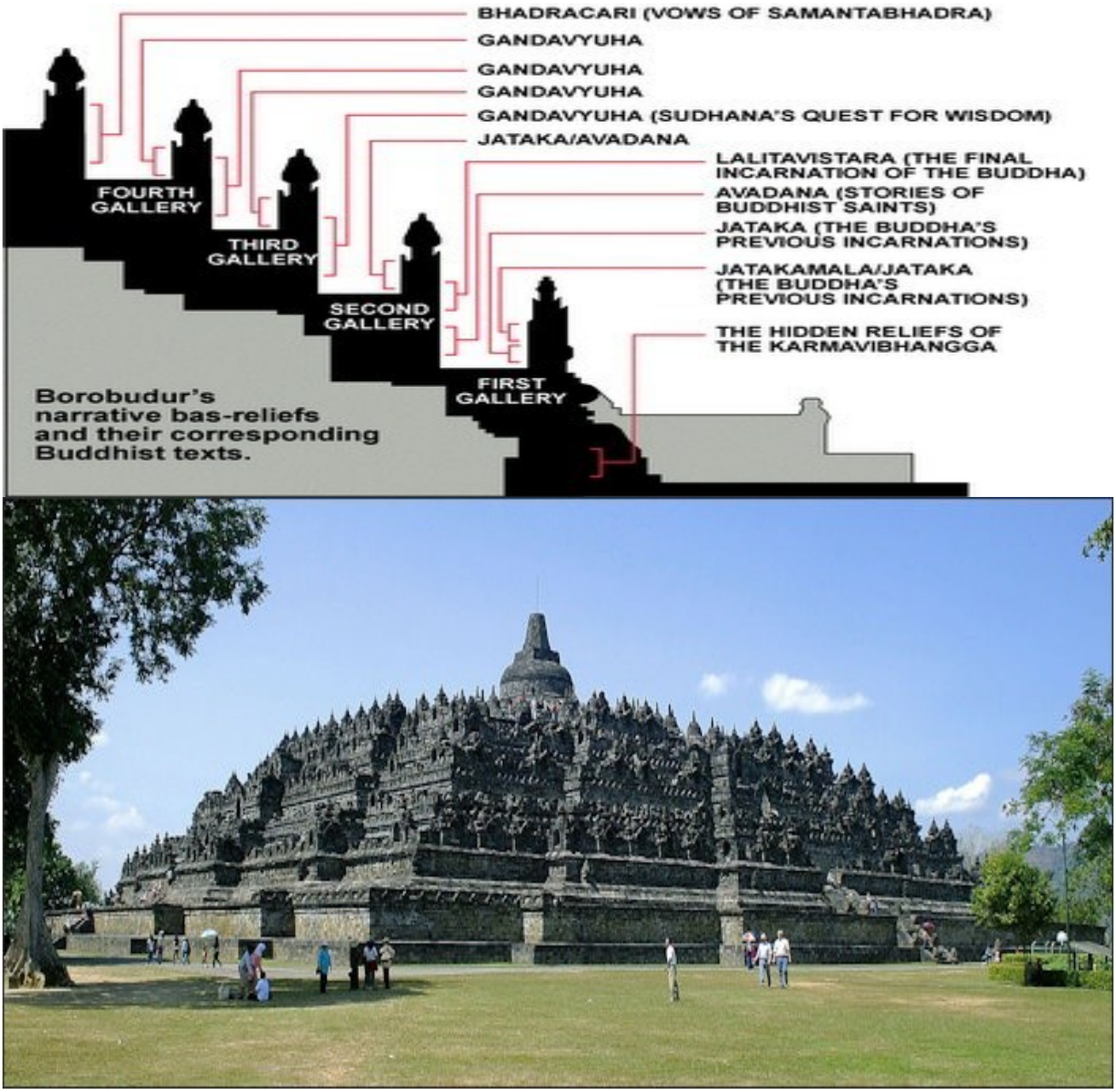
Indian connect in History of Borobudur

Borobudur was built by the Sailendra Dynasty kings in the 8th and 9th centuries, around that time that Charlemagne ruled Europe. When it was completed an epic poet from Ceylon wrote: "Thus are the Buddha incomprehensible, and incomprehensible is the nature of the Buddhas, and incomprehensible is the reward of those who have faith in the incomprehensible." According to UNESCO: Founded by a king of the Saliendra dynasty, Borobudur was built to honour the glory of both the Buddha and its founder, a true king Bodhisattva. This colossal temple was built between AD 750 and 842: 300 years before Cambodia's Angkor Wat, 400 years before work had begun on the great European cathedrals. Little is known about its early history except that a huge army of workers worked in the tropical heat to shift and carve the 60,000 square meters of stone.

Why it was built remains a mystery. There are no written records on the subject. No ancient cities have been found nearby. There is no clear sanctuary as a place of

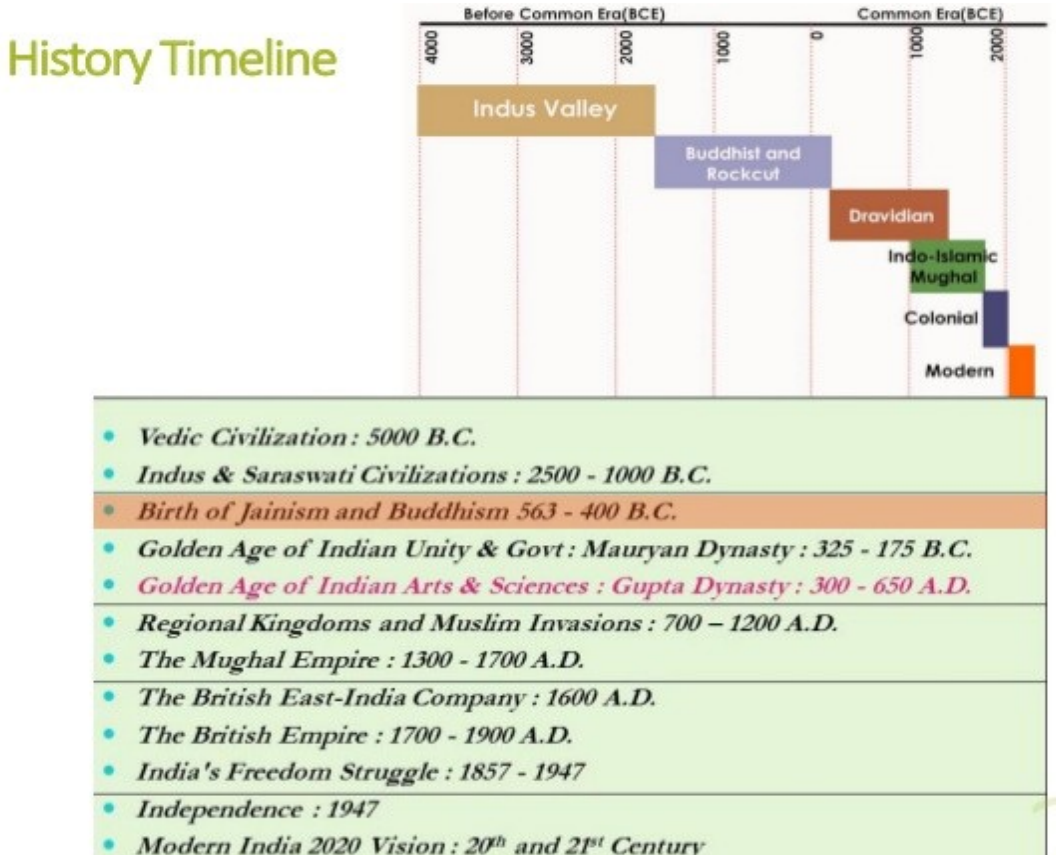
worship and no room to store icons. Many historians and archeologists believe that Borobudur is not a temple but rather a kind of advertisement for Buddhism. According to an expert on the subject, John Mikic, Borobudur was built to “to engage the mind” and to “give a visual aid for teaching a gentle philosophy of life."

Borobodur was an active religious center until the 10th century when it was abandoned for reasons that are not clear. At the beginning of the 11th century AD, because of the political situation in Central Java, divine monuments in that area, including the Borobudur Temple became completely neglected and given over to decay.According to UNESCO: the Stylistically the art of Borobudur is a tributary of Indian influences (Gupta and post-Gupta styles).



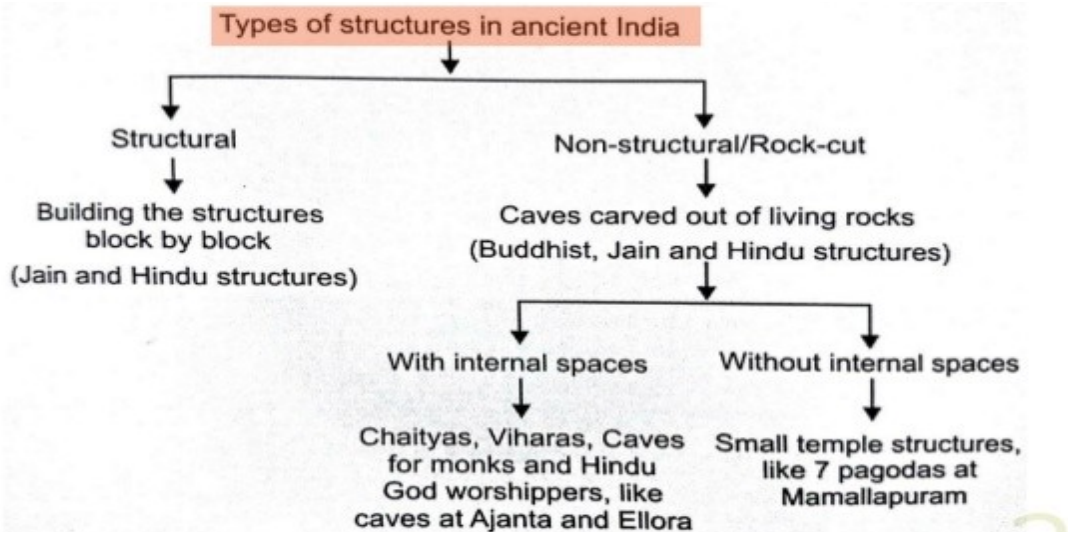
Borobudur, northwest view

Buddhist Architecture-Viharas- BUDDHIST ARCHITECTURE



The early structures that were built during the empires were permanent in nature and long lasting. Non-Structural or rock-cut means that they were carved out of mountain cliff or huge rocks.

The Buddhist Architecture began with the development of various symbols, representing aspects of the Buddha's life(563BCE- 483BCE). Indian Emperor Ashoka, not only established Buddhism as the state religion of his large Magadh empire, but also opted for the Architectural monuments to spread Buddhism in different places. The major features of this style are Stupas, Stambhas, Chaityas, Viharas. Beginning of Buddhist architecture in India was in the 3rd century BCE.. Three types of structures are associated with the religious architecture of early Buddhism: monasteries



4. (Viharas), places to venerate relics
5. (stupas), and shrines or prayer halls
6. (chaityas also called chaitya grihas), which later came to be called temples in some places.

This religion initially did not involve making of figures or idols but gradually the followers started making sculptural representations of Buddha. There are 2 phases of Buddhism:

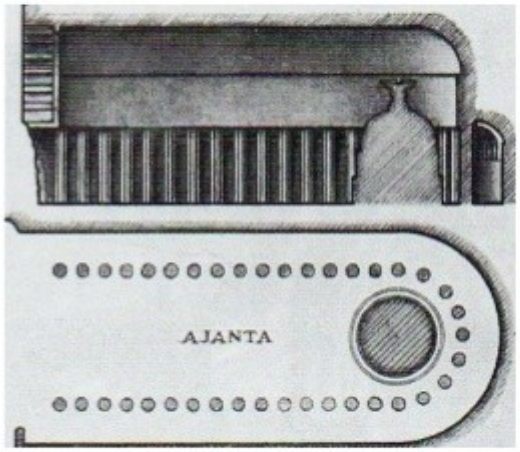
1. HINAYANA- 2ND CENTURY BC- 2ND CENTURY AD
2. MAHAYANA- 3RD CENTURY AD – 7TH CENTURY AD

Viharas initially were only temporary shelters used by wandering monks during the rainy season, but later were developed to accommodate the growing and increasingly formalized Buddhist monasticism(monkhood). An existing example is at Nalanda (Bihar). The initial function of a stupa was the veneration and safe-guarding of the relics of the Buddha. The earliest surviving example of a stupa is in Sanchi (Madhya Pradesh). In accordance with changes in religious practice, stupas were gradually incorporated into chaitya-grihas (prayer halls). These reached their high point in the 1st century BC, exemplified by the cave complexes of Ajanta and Ellora (Maharashtra). The Pagoda is an evolution of the Indian stupa. Buddhist architecture in India

•100ft by 40ft by 33ft

•Same roof ribs

•Two tiered stupa with circular base and elongated dome



Cave No 10 at Ajanta

Buddhist architecture emerged slowly in the period following the Buddha's life, along with the Hindu temple architecture. Brahmanist temples at this time followed a simple plan – a square inner space, the sacrificial arena, often with a surrounding ambulatory route separated by lines of columns, with a conical or rectangular sloping roof, behind a porch or entrance area, generally framed by freestanding columns or a colonnade. The external profile represents Mount Meru, the abode of the gods and centre of the universe. The dimensions and proportions were dictated by sacred mathematical formulae. This simple plan was adopted by Early Buddhists, sometimes adapted with additional cells for monks at the periphery (especially in the early cave temples such as at Ajanta, India). The basic plan survives to this day in Buddhist temples throughout the world. • The profile became elaborated and the characteristic mountain shape seen today in many Hindu temples was used in early Buddhist sites and continued in similar fashion in some cultures. • In others, such as Japan and Thailand, local influences and differing religious practices led to different architecture. Gupta period temple at Sanchi besides the Apsidal hall with Maurya foundation Evolution of Buddhist Architecture Early Buddhist Architecture.

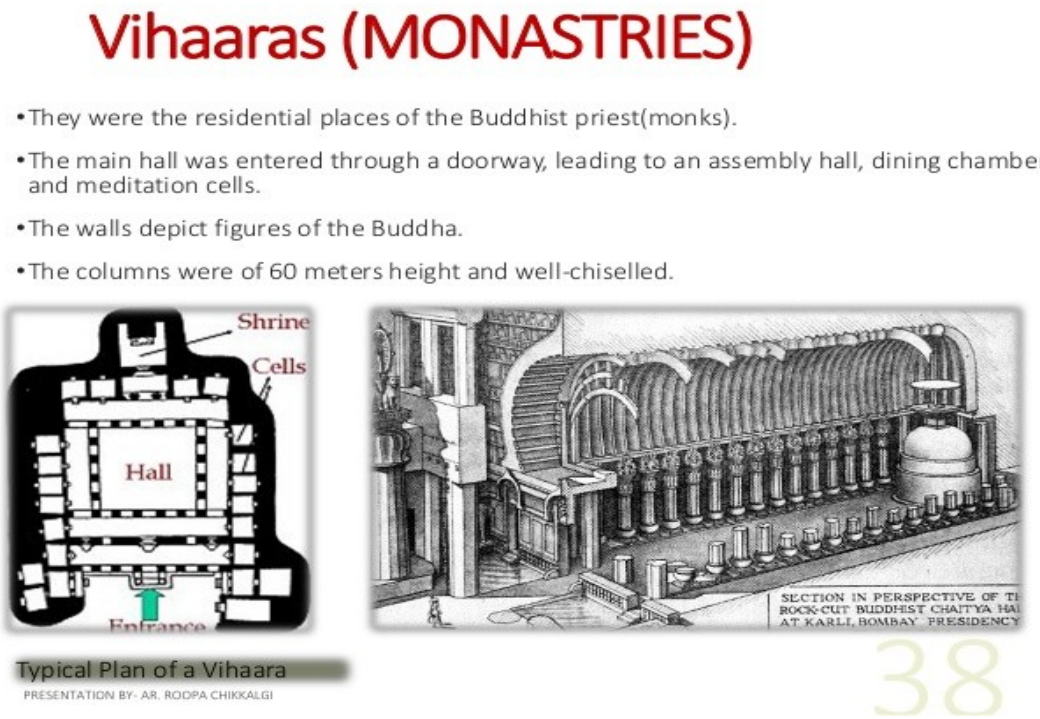
Early Buddhist temples: Early temples were often timber, and little trace remains, although stone was increasingly used. Cave temples such as those at Ajanta have survived better and preserve the plan form, porch and interior arrangements from this early period. As the functions of the monastery-temple expanded, the plan form started to diverge from the Brahmanist tradition and became more elaborate, providing sleeping, eating and study accommodation. A characteristic new development at religious sites was the stupa. Stupas were originally more sculpture than building.• One of the earliest Buddhist sites still in existence is at Sanchi, India, and this is centred on a stupa said to have been built by King Ashoka (273-236 BCE). The original simple structure is encased in a later, more decorative one, and over two centuries the whole site was elaborated upon. The four cardinal points are marked by elaborate stone gateways. As with Buddhist art, architecture followed the spread of Buddhism throughout south and east Asia

and it was the early Indian models that served as a first reference point, even though Buddhism virtually disappeared from India itself in the 10th century. The Borobudur Temple, Indonesia Buddhist Temple during Gupta Period.

Decoration of Buddhist sites became steadily more elaborate through the last two centuries BCE, with the introduction of human figures, particularly on stupas. However, the Buddha was not represented in human form until the 1st century CE. Instead, aniconic symbols were used. This is treated in more detail in Buddhist art, Aniconic phase. It influenced the development of temples, which eventually became a backdrop for Buddha images in most cases. Temples became Backdrop for Budhha images Buddhisttemples

Architectural History FEATURES OF BUDDHIST ARCHITECTURE

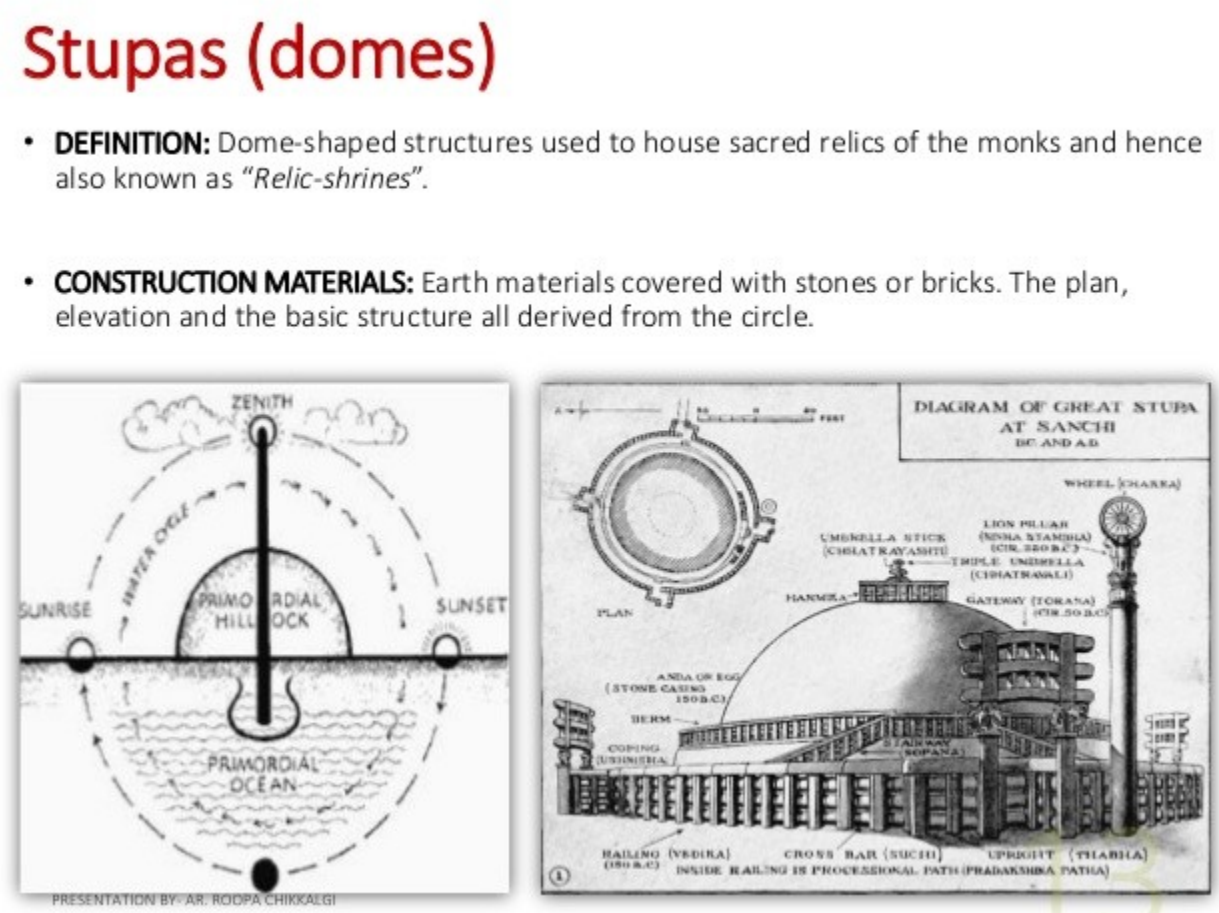
The major features of this style are: Stupas (Buddhist shrine) Stambhas (Pillars) Chaityas (Caves) Vihaaras (Monasteries) • Out of these, the prominent examples of Chaitya Hall and Viharas can be found in Rock-Cut Architecture. Even the Stupa can be found in certain Chaitya halls in a miniature form. Features of Buddhist architecture.



Stupas (domes) DEFINITION: Dome-shaped structures used to house sacred relics of the monks and hence also known as “Relic-shrines”. CONSTRUCTION MATERIALS: Earth materials covered with stones or bricks. The plan, elevation and the basic structure all derived from the circle. STUPA IS MOUND OF THE EARTH ENCLOSING A RELICCAN BE COMPARED WITH THE MASSIVE FORM OF THEGREAT PYRAMIDS OF EGYPT. THEY ALSO CALLED AS THUPPA IN PALI, DAGABA INSIMBALI, TOPE IN ENGLISH & DHATUGRABH IN SANSKRIT.(DHATUGRABH=RELICS PRESERVED IN VESSEL CLASSIFIED INTO THREE TYPES.:
1.SARIKA STUPA-raised over body relics.

2.PARIBHOJIKA STUPA - erected over the articles, like the bowl, the sanghati
3. UDDESHIKA STUPA- Stupas built as commemorative monuments.

Structural Features: The spherical dome symbolized the infinite space of the sky. The dome is called as anda or egg. The dome is a solid brick work is 36.60M in dia, and 16.46M high. • A large hemispherical dome which is flat at the top, and crowned by a triple umbrella or Chattra on a pedestal surrounded by a square railing or Harmika. A railing enclosed called Vedica which is about 3.35 M high leaving an ambulatory passage or pradikshina path with the gateways. The upper ambulatory passage (midhi) 4.87M high from the ground and 1.8M wide. There are four gateways known as Toronas at the cardinal points of the campus. Toronas built by ivory or metal worker. Elevation Plan.



PLANNING OF SANCHI STUPA

Stone vedicaUpper Ambulatory 1.8m wide3.35m high Harmika or triple umbrella Suchi 60 cm dia Urdhava patas 45cm dia 60-90 cmc/c Ushnisha Steps leading to upper ambulatoryLower Ambulatory 3.35 m. high.

- STUPA IS MOUND OF THE EARTH ENCLOSING A RELICCAN BE COMPARED WITH THE MASSIVE FORM OF THEGREAT PYRAMIDS OF EGYPT
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Toranas at Sanchi Toranas are associated with Buddhist stupas like the Great Stupa in Sanchi, as well as with Jain and Hindu structures, and also with several secular structures. In the 1st century BCE, four elaborately carved toranas (ornamental gateways) and a balustrade encircling the entire structure were added around the sanchi stupa built during Mauryan period.

Stambhas (pillars) The next development was the free standing monolithic columns erected over sites selected because of their sacred associations. They were basically stone objects.

DEFINITION: In the context Of Hindu Mythology, stambha, is believed to be a cosmic column. DESIGN: A stambha consists of a circular column or shaft slightly tapering towards the summit (monolithic). On top of this shaft is the Persepolitan bell or the inverted lotus shaped base. Above this is the abacus on top of which rests the crowning sculpture. These three portions were carved out of a single stone (monolithic). The famous iron pillar from the Gupta period is a fine specimen, withstanding exposure to rain & storm, yet remaining smooth and unrusted bearing testimony to the mastery of Indian metal-casting.
Iron Pillar Ashokan Pillar

CHAITYAS -A Buddhist shrine or prayer hall with stupa at one end. Made for large gatherings of devotees. Made in rock-cut due to permanency of structure. Chaityas were influenced by ascetic lifestyle of Vedic period and tendency of hermits to retire in solitude. Basic Characteristics Accommodates Stupa. Apsidal Plan. No division between nave and chaitya i.e space for congregational service not clearly defined. Vaulted hall. Colonnades. Side aisles.

Why a Chaitya Hall? : The stupa evolved from being a funerary mound carrying object of worship, had a sacral value. Building needed to accommodate copies of stupa and provide shelter. A structural house for religious activities. Birth of temples with idol worship. Building had almost circular plan and a domed roof.

Chaityas (caves) The next significant development was the rock-cut architecture. Its earliest and most imp. Marvel was the Lomas Rishi Cave, at Barabar hills, Bihar. Derived from timber huts and wooden arch. of Vedic times. They were rectangular halls, with finely polished interior walls. There were a number of well proportioned pillars, generally around 35, and a semi-circular roof. Opposite one entrance stood a stupa. All the pillars have capitals on them, with carvings of a kneeling elephant mounted on bell-shaped bases.

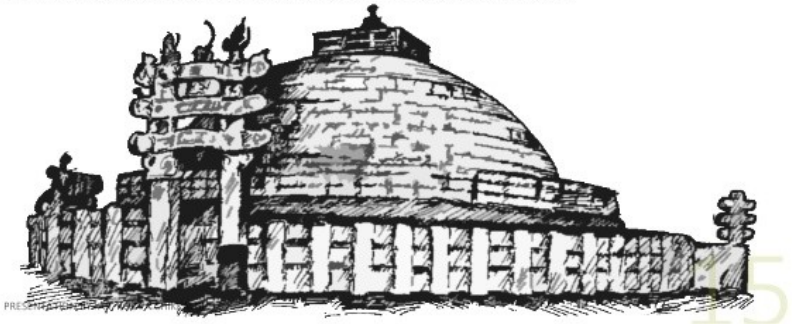
Architecturally, chaityas show similarities to Roman Design concepts of columns and arch. The monks built many structures which were carved out of a single massive rock, done with hammer and chisel, bare hands. The chaityas were almost 40 meters long, 15 meters wide and 15 meters high. Chaityas (caves)

DESIGN: The pillars had three parts: prop, which is the base which is buried into the ground; the shaft, the main body of the pillar which is polished and chiseled; and capital, the head of the pillar where figures of animals are carved. The Stupa at the end of the Chaitya Hall has an umbrella at the top. This Umbrella suggests association with Buddhism. There is a wooden facade, made out of teak wood. The facade makes it look as if the entire structure was resting on the back of an elephant with ivory tusks and metal ornaments.

Architectural Features: Wooden construction inspired from Vedic period imitated in natural rock. Supplemented with wooden surfaces for e.g.. Screens etc. (half timber construction) Shows similarities to Roman concept of column and arch, but no evidence of any relation.

Architectural FeaturesRectangular halls with finely polished interior walls. Well proportioned pillars with capitals(around 35). Semi circular roof. Pillar had three parts: prop, base buried in ground and shaft. Stupa at the end. Extensive use of motifs, decorative and symbolic.

- Sanchi Stupa is located 40 km north east of Bhopal, and 10 km from Besnagar and Vidisha in the central part of the state of Madhya Pradesh.
- Sanchi Stupa was built by Ashoka (273-236 B.C.)
- Sanchi Stupas is located on the top of the Sanchi hill, which raise about 100M high above the plain.
- The 'Great Stupa' at Sanchi is the oldest stone structure in India



- The spherical dome symbolized the infinite space of the sky. The dome is called as anda or egg.
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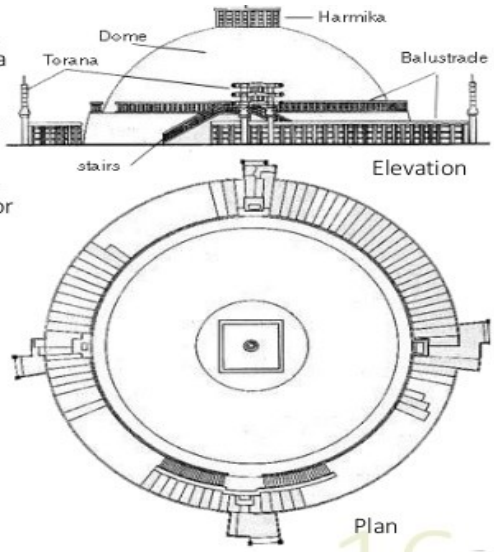

PRESENTATION BY- AR. ROOPA CHIKKALGI

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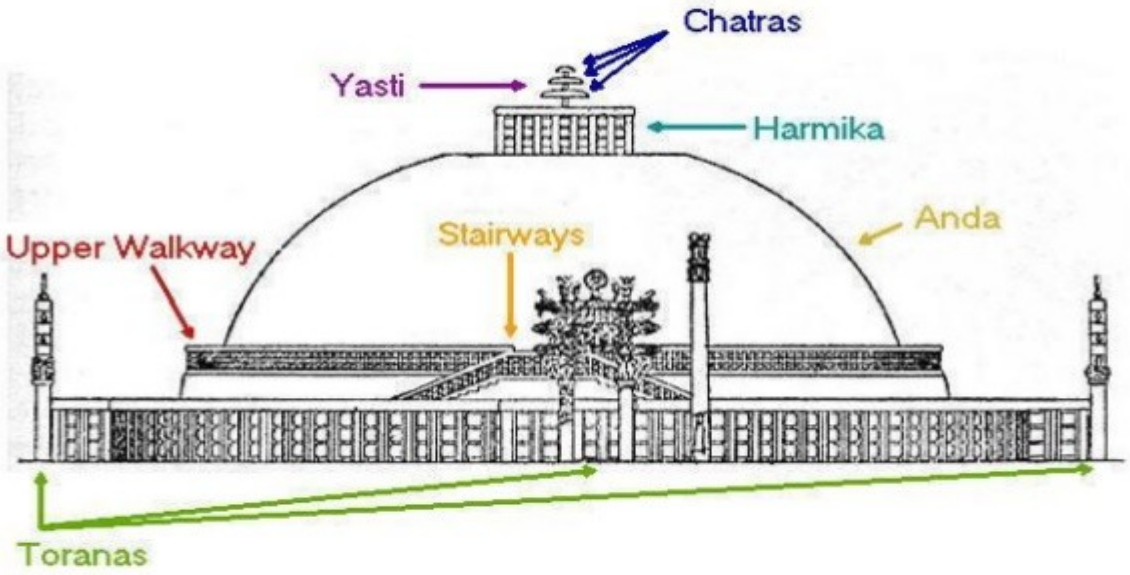
Chaitya Arch : Chaityas normally had a great-horseshoe archway with a wall or screen below. There was sun window in center of the archway for light.
Evolution of Chaitya Hall

VIHARAS A monastery, arrangement of cells for accomodation of monks Dwellings were simply wooden construction/thatched bamboo huts Near settlements on trade routes After first century AD, Viharas came in as educational institutes



18

Basic Characteristics Quadrangular court for gathering Surrounded by small cells Front wall incorporated a shrine for image of Buddha Cells had rock cut platforms for beds Viharas were not alike in design Doorways were on sides of the walls of main hall.Construction and Materials Rock-cut architecture basically used wooden construction down to joinery details Hardly structuralIn brick, corbelled arches are used, and very large bricks to for large span motifs used floral patterns, animals(used throughout the kingdom)

Vihaaras (MONASTRIES) They were the residential places of the Buddhist priest(monks). The main hall was entered through a doorway, leading to an assembly hall, dining chambers and meditation cells. The walls depict figures of the Buddha. The columns were of 60 meters height and well-chiselled. Typical Plan of a Vihaara

WHY WESTERN GHATS •Uniformity of texture in hills. Horizontally stratified. Ends in perpendicular cliffs. BUILDING STRATEGYCliff was made perpendicular Entry was made A small excavated for architect monk Excavation from top to bottom .Subsequently other cells were build. Ajanta Cave No. 10 100ft by 40ft by 33ft Same roof ribs Two tiered stupa with circular base and elongated dome. Bhaja(150 b.c) Most primitive hall. 55ft by 26ft, side aisles 3.5ft wide and high stilted vault 29ft high with closed rank wood ribs. Facades have numerous mortice holes for fixing elaborate wooden frontages Simple stupa with cylindrical base and a wooden harmikaa and chhatri. One central doorway+2 side ones. Projection balcony supported on four pillars. H shaped framework held by projection beams.

Ajanta No.9 Entire hall rock carved. Rectangular plan, ceilings of side aisles flat with perpendicular pillars. Doorway in centre and a window on either side, topped by elegant cornice. Lattice windows around archways. No wooden ribs bracing the vaults.

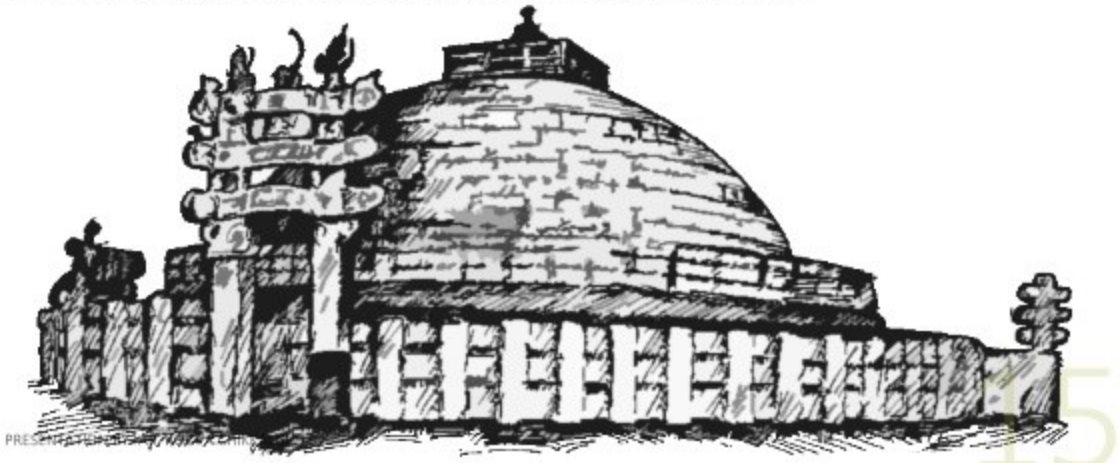
Mahayana Phase- 400 A.D -600 A.D: Basic Characteristics -Main seats of this school were Ajanta, Ellora, Auarngabad. There was a change in iconography since both schools perceived different imagery of Buddha. Elements of Chaitya Halls remained same. Viharas became finer and more elaborate. Ajanta Cave No. 26 •68ft by 36f by 31 ft. Last Ajanta Hall. More ornamented, right from pillars, elaborate triforium, and recessed panels. Portico had 3 doorways with Chaitya window above. Decline of style by excessive workmanship.

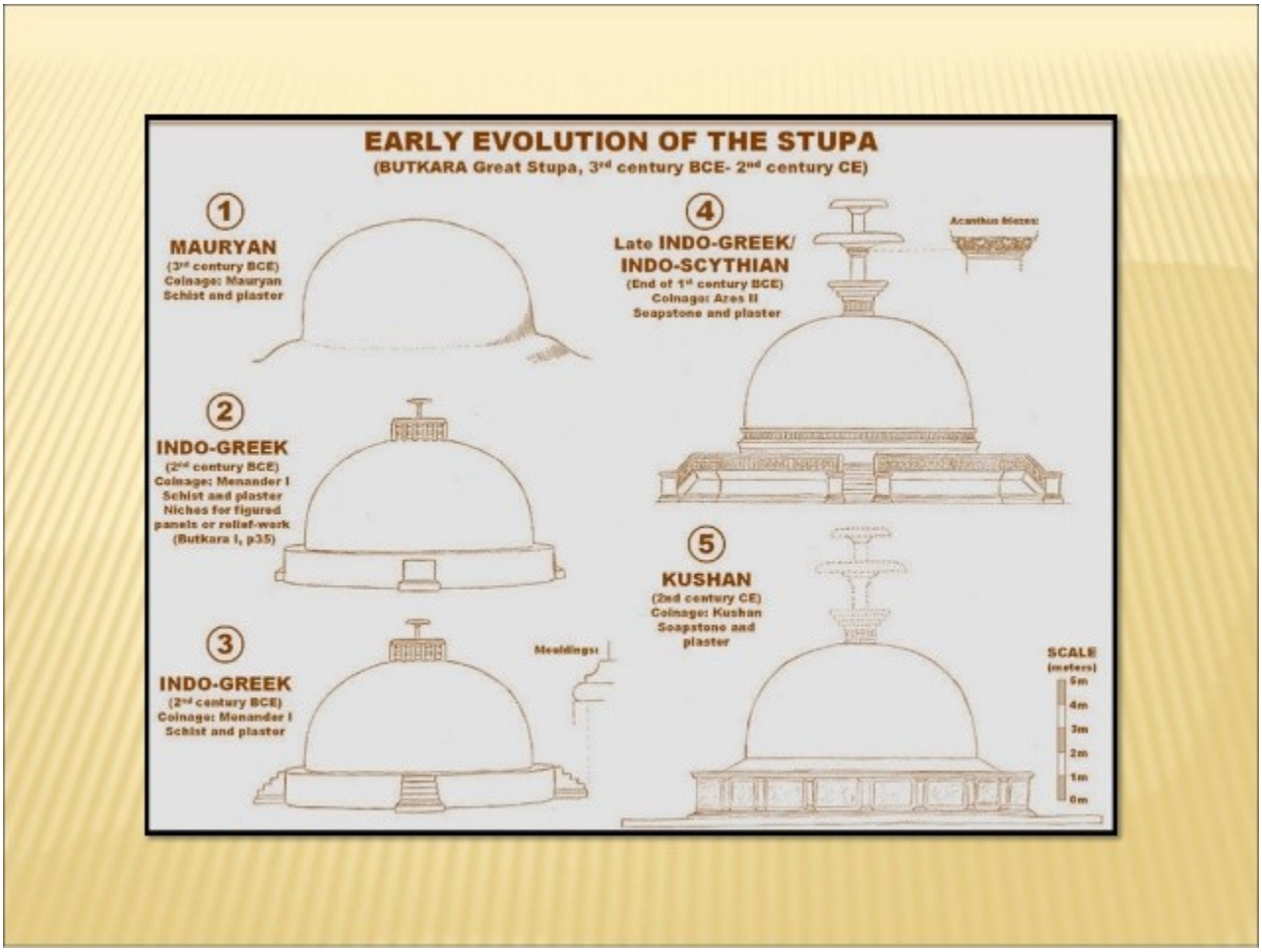
Ellora Caves:Caves excavated out of low ridge hills, Buddhists occupied best site. Dhedwada group(caves 1 to 5) and 6 to 12 were two main groups Mahanwada cave(no.5) had both monastery and hall, it had two parallel platforms for seating of priests Later group had chaitya hall no. 10 Cave no. 2 has 48 pillars colonnade attached with side gallery. Cushion pillar comes in focus now.Caves 66 to 12 -Largest monasteries. No. 12 is knows as tin thaal(thre stories), can lodge 40 priests (108ft by 60 ft). Does not have any ornamentation. Access is through pillared verandah. All three floors are different.

Inspiration and influence.Inspired from Vedic wooden construction techniques, prevalent to Buddhism coming in vogue. Inspired Indian temples, for eg. Early Brahmanical temples in South India (for eg. Chaitya window motif), temples at Sanchi. Even Jain caves got influenced from Buddhism, fro eg. Udaigiri. Spread to North East.Temples Since the same guild of artists worked for all the religions, there is hardly any difference in the treatment of the Buddhist, Brahmanical and Jain temples in a particular region at a given period. The oldest existing temple is temple at Sanchi, which is also the earliest known example of Gupta temple style. The only décor was at the entrance present with bands of scrolls and pillars. This temple lays the logical foundation of temple architecture in North India, which developed in due course a shikhara over its basic form.
The Mahabodhi Temple is a Buddhist temple in Bodh Gaya, marking the location where the Buddha, is said to have attained enlightenment. Bodh Gaya is located about 96km from Patna, Bihar. Next to the temple, on its western side, is the holy Bodhi tree and the monastery there the Bodhimanda Vihara. The tallest tower is 55 metres (180 ft) tall. Holy Bodhi tree Mahabodhi Temple

Sanchi Stupa

- Sanchi Stupa is located 40 km north east of Bhopal, and 10 km from Besnagar and Vidisha in the central part of the state of Madhya Pradesh.
- Sanchi Stupa was built by Ashoka (273-236 B.C.)
- Sanchi Stupas is located on the top of the Sanchi hill, which raise about 100M high above the plain.
- The 'Great Stupa' at Sanchi is the oldest stone structure in India





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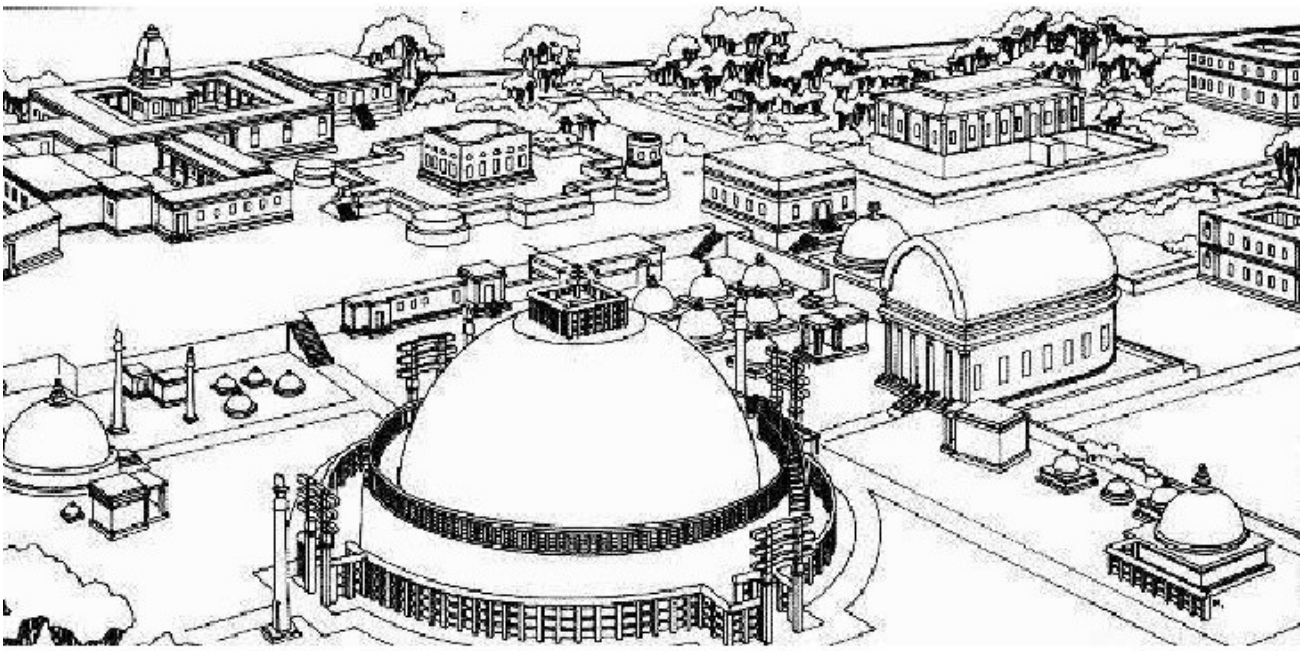
LOCATION: Stupas were erected over the sacred relics of the monks and worshiped with great reverence. They are therefore known as Relic-Shrines. The stupa more then a funeral mound was planned like a Vedic village.
Great Stupa, Sanchi (Madhya Pradesh)- Dharmaksha stupa
SITE PLANNING



There are four gateways known as Toronas at the cardinal points of the campus. Toronas built by ivory or metal worker. Plan and elevation of Sanchi Stupa.The terrace (midi) 4.87M high from the ground was added thus creating a separate and upper ambulatory passage 1.8M wide. At the base of the dome is a high circular terrace probably meant for parikrama or circumambulation and an encircling balustrade. ϖ a railing enclosed called Vedica which is about 3.35 M high leaving an ambulatory passage or pradikshina path with the gateways. ϖ a large hemispherical dome which is flat at the top, and crowned by a triple umbrella or Chattra on a pedestal surrounded by a square railing or Harmika. ϖ The dome is a solid brick work is 36.60M in dia, and 16.46M high. The spherical dome symbolized the infinite space of the sky, abode of God. The dome is called as anda or egg or.

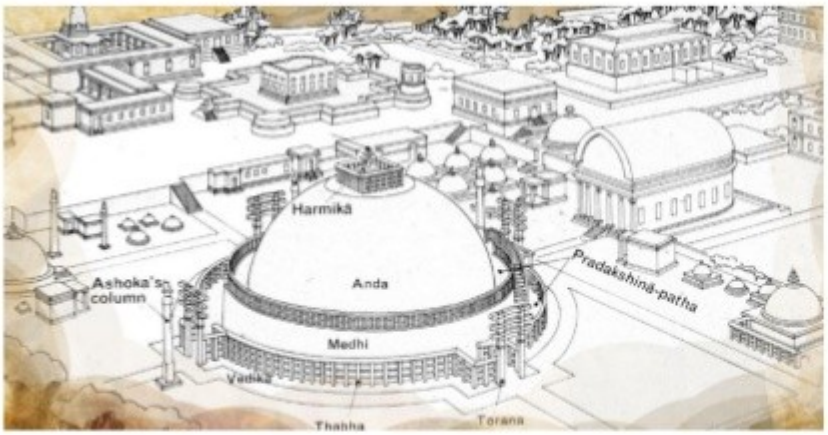
The top panels is crowned with Tri-Ratna symbol of the Buddhist trinity, Buddha, the law (dharma) and monastic community (sangha) with wheels of justice in the centre which rest on elephant sϖ The panels have volutes at their terminal ends surmounting with animal sculpture. ϖ These columns support three separate horizontal panels between each of which is row of ornamental balusters. ϖ Torona consist of 2 square upright columns with capitals or lion of elephant heads denoting strength. ϖ The total height of this erection is about 10. 36M with a width of 3M. Ashok chakra The Gateway 'Torona'ϖhaped pedestal.

FEATURES Harmika or triple umbrella Upper Ambulatory 1.8m wide3.35m high Stone vedica Ushnisha Urdhava patas 45cm dia 60-90 cmc/c Suchi 60 cm dia Lower Ambulatory 3.35 m. high Steps leading to upper ambulatory. Front View of sanchi stupa Column of Torna Front View of Torna Elephants and Yakshi of the Eastern Torana, Great Stupa, Sanchi, mid-1st century BC - AD 1st century View of Torna from upper ambulatory. these niches were mostly provided to erect Buddha's statue. Delicately carved with beautiful floral and geo-metrical patterns. Site Mapϖ

a line of sculptured ornaments.run below it ϖThe facing of stone basement has 8 niches, ϖThe Stupa consist of large tower built in stone masonry at the basement for a height of 13M and in brick masonry above for a height 34M. built by Ashoka and later rebuilt in the Gupta period. ϖ situated Benares. 6.5KM to the north of a commemorative Stupa, built in 7th centuary.

Buddhist architecture in India

- Viharas initially were only temporary shelters used by wandering monks during the rainy season, but later were developed to accommodate the growing and increasingly formalized Buddhist monasticism(monkhood). An existing example is at Nalanda (Bihar).
- The initial function of a stupa was the veneration and safe-guarding of the relics of the Buddha. The earliest surviving example of a stupa is in Sanchi (Madhya Pradesh).



- In accordance with changes in religious practice, stupas were gradually incorporated into chaitya-grihas (prayer halls).
- These reached their high point in the 1st century BC, exemplified by the cave complexes of Ajanta and Ellora (Maharashtra).
- The Pagoda is an evolution of the Indian stupa.

- The spherical dome symbolized the infinite space of the sky. The dome is called as anda or egg.
- The dome is a solid brick work is 36.60M in dia, and 16.46M high.
- A large hemispherical dome which is flat at the top, and crowned by a triple umbrella or Chattra on a pedestal surrounded by a square railing or Harmika.
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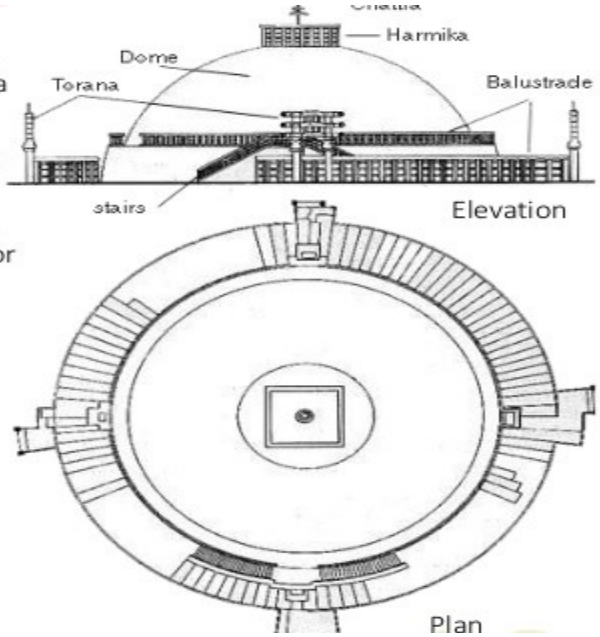
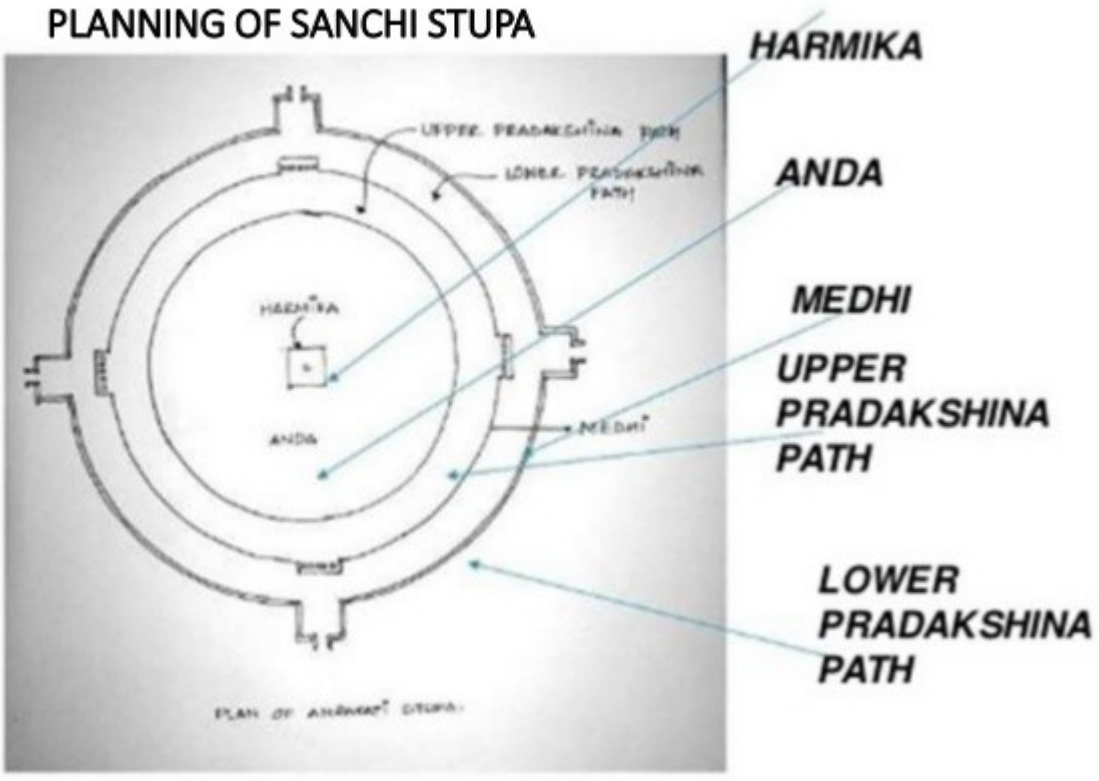


PLANNING OF SANCHI STUPA



PRESENTATION BY- AR. ROOPA CHIKKALGI

17

gateways known as 'TORANAS' at the cardinal points to the compass and are slightly staggered from the railing enclosing stupa.

•The ambulatory or pradakshina path is fenced by railing 3.35m high all around the stupa.

•Outside the railing there once stood the famous ashoka pillar, the fragments of which are noticed now to the right of southern torana

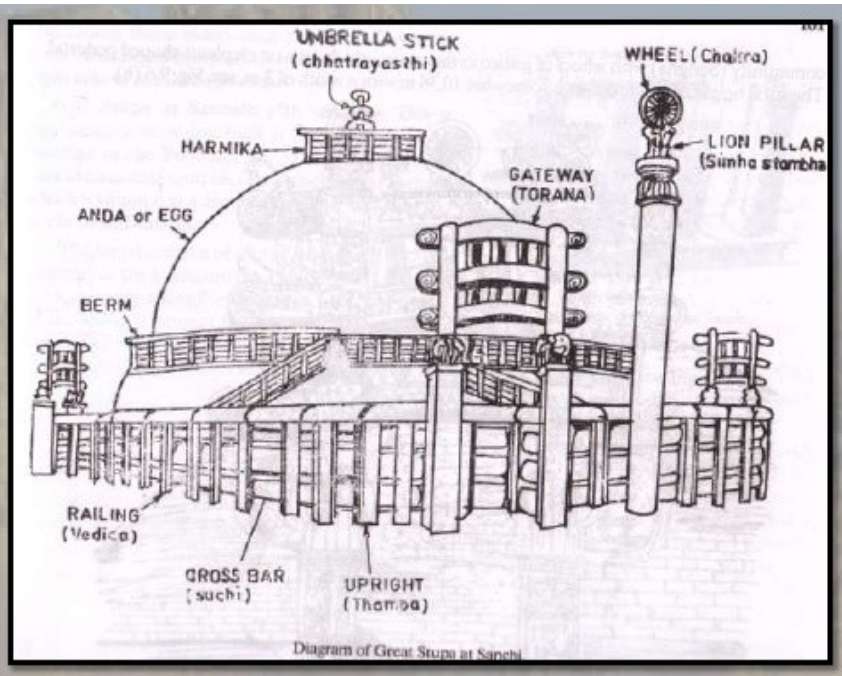


Diagram of Great Stupa at Sanchi

Buddhist Architecture- Stupa

- STUPA IS MOUND OF THE EARTH ENCLOSING A RELICCAN BE COMPARED WITH THE MASSIVE FORM OF THEGREAT PYRAMIDS OF EGYPT
- THEY ALSO CALLED AS THUPPA IN PALI, DAGABA INSIMBALI, TOPE IN ENGLISH & DHATUGRABH IN SANSKRIT.(DHATUGRABH=RELICS PRESERVED IN VESSEL

CLASSIFIED INTO THREE TYPES.

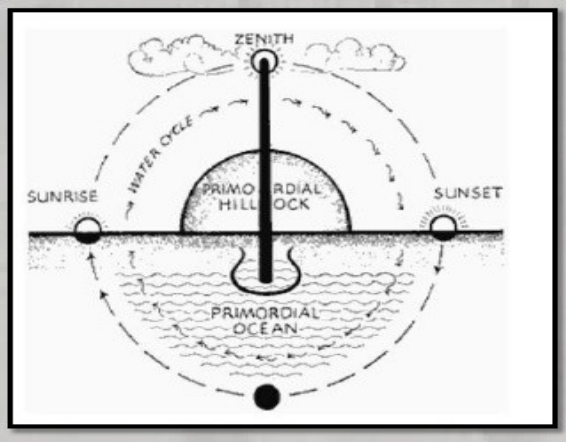
•*SARIKA STUPA*-raised over body relics.
•*PARIBHOJIKA STUPA* - erected over the articles, like the bowl, the sanghati

•UDDESHIKA STUPA- Stupas built as commemorative monuments.

PRESENTATION BY- AR. ROOPA CHIKKALG

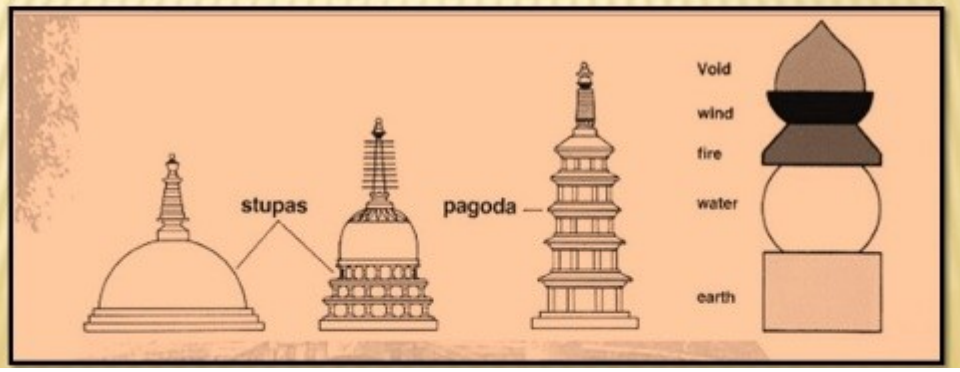
STUPA

- A stupa is a mound-like structure containing buddhist relics, typically the remains of Buddha, used by Buddhists as a place of worship.
- These stupas are the circular tumuli built of earth, covered with stone or brick, the plan, elevation, section and the total form of which were all derived from circle.



Stupa become a cosmic symbol in response to a major human condition: death. With the enlightenment of the Buddha, stupa became a particularly buddhist symbol.

- After many years of teaching Buddha died at the age of 80 .his body was cremated and ashes were divided in to eight parts the ashes were then deposited in several special mound –shaped monuments called Stupas
- Umbrella were often mounted at the top of stupa as a sign of honor and respect
- Also known as thupa ,thope, pagoda ,dagoba



Although there have been various arguments by authors of Indian temple architecture like Stella Kramrisch and Michael W. Meister about the applicability of the Vastu Purusha Mandala as a governing device for temple architecture, it is safe to say that for formulating the layout of the temple, the Vastu Purusha Mandala has been an imperative tool. Though the 8 x 8 grid or the Manduka Vastu Mandala has been used in various temples of Indian architecture, it is to be noted that regional differences have played a major influence on the workability of the mandala design throughout India. Customarily, mandalas were spaces for the symbolic consciousness of universal theories which help in the awakening of the individual psyche. The mandalas can be thought of as diagrams that function as a cue to reach a contemplational state which is the primary aim of the tradition. The form of the temples that are based on the regulating lines of the mandala were meant to create spaces that bring about a “physical and spatial” communion between God and man. [1]

The Vastu Purusha Mandala contains a minimum of nine sections signifying the directions north, south, east, west, northeast, northwest, southeast, southwest and the centre represented as square grids. In the Vastu Purusha Mandala, the Purusha’s head is located in the northeast direction and this is considered utmost sacred. In the southwest are his feet and his knees and elbows in the northwest and southeast. Kept open and clear in the centre part of the diagram are his main organs and his torso. Starting from a single undivided square of 1 x 1 there are grid patterns ranging up to 32 x 32 thus making it 1024 sections. Architecturally, the adaptation of the Vastu Purusha Mandala has been seen in the design of houses, palaces, temples and even cities. Integrating it into the design brings a certain amount of order in the design. Here, the squares are assumed as cubes of architectural spaces.

The five elements of earth, water, fire, air and space correspond with specific sections of the Vastu Purusha Mandala. The south-west direction is associated with the element of earth(Bhumi); south-east with the elements of fire (Agni); north-east with the element of water (Jala); north-west with the element of air (Vayu) and the centre space with the element of space (Akasha). [2]

Manduka Mandala - Hindu Temple 64 padas

Indian temples are microcosm of Cosmos, acting as a connecting bridge between physical world and divine world through their proportional arrangement. Mandapa,

which were entrance porches in the beginning became an integral part of the temple plan in providing additional functions and in form providing an ex- pression of cosmos especially in elevation. Ashapuri temples analyzed here, corresponds to Nagara temple proportions varying in proportionas they belong to two different styles of nagara Architec- ture. From the study of Adam Hardy it is said that they possessed temples of different styles in Nagara other than these two. The site of Ashapuri seems to be a place for the development of the Ngara school of archigtecture.

The Gupta Dynasty ruled the North Central India between the 4th and 6th centuries CE and is considered a golden age for arts. The Dynasty was founded by Chandragupta I who acceded to the throne in 320 CE. The Guptas were the first to build Hindu and Buddist temples to fulfill a certain purpose.This style of architecture displays a variety of beautifully adorned towers, engravings and carvings, and rock cut shrines in their temples. Unfortunately very few among the many temples of the Gupta Dynasty survive today.
https://www.thehansindia.com/posts/index/Hans/2016-05-31/Understanding-Gupta-Architecture/231823

During the Gupta empire—from about 320 to 550 CE—emperors used Hinduism as a unifying religion and helped popularize it by promoting educational systems that included Hindu teachings; they also gave land to brahmins. The Gupta emperors helped make Hinduism the most popular religion on the Indian subcontinent. North Central India saw the first purpose-built Hindu (and also Buddhist) temples which evolved from the earlier tradition of rock-cut shrines.

Cosmos: In Gupta-era India, the square was considered to be the perfect shape and often used as a representation of the cosmos. Gupta temples often served as monuments to multiple deities, not just one, so this understanding of things united within the cosmos is significant. Gupta rule, while solidified by territorial expansion through war, began a period of peace and prosperity marked by advancements in science, technology, engineering, art, dialectics, literature, logic, mathematics, astronomy, religion, and philosophy. Buddhism greatly influenced the Indian religion. It gave to Indian people a simple and popular religion. It rejected ritualism, sacrifices and dominance of priestly class. Buddhism spread rapidly because its teachings were very simple and it was taught in the language of the people. The patronage of two great emperors — Ashoka and Kanishka — made it a world religion. Its opposition to the caste system made it popular among the castes that were considered low.

The Borobudur monument combines the symbolic forms of the stupa (a Buddhist commemorative moundusually containing holy relics),
temple mountain (based onMount Meru of Hindu mythology), and the mandala (a mystic Buddhist symbol of the universe, combining the square as earth and

The Shailendra dynasty (IAST: *Śailēndra* derived from Sanskrit combined words *Śaila* and *Indra*, meaning "King of the Mountain", was the name of a notable Indianised dynasty that emerged in 8th-century Java, whose reign signified a cultural renaissance in the region. The Shailendras were active promoters

of Mahayana Buddhism with the glimpses of Hinduism, and covered the Kedu Plain of Central Java with Buddhist monuments, one of which is the colossal stupa of Borobudur.The Shailendras are considered to have been a thalassocracy and ruled vast swathes of maritime Southeast Asia, however they also relied on agricultural pursuits, by way of intensive rice cultivation on the Kedu Plain of Central Java. The dynasty appeared to be the ruling family of both the Medang Kingdom of Central Java, for some period, and the Srivijaya Kingdom in Sumatra.

The inscriptions created by Shailendras use three languages; Old Malay, Old Javanese, and Sanskrit - written either in the Kawi alphabet, or pre-Nāgarī script. The use of Old Malay has sparked speculation of a Sumatran origin, or Srivijayan connection of this family. On the other hand, the use of Old Javanese suggests their firm political establishment on Java. The use of Sanskrit usually indicates the official nature, and/or religious significance, of the event described in any given inscription. After 824, there are no more references to the Shailendra house in the Javanese ephigraphic record. Around 860 the name re-appears in the Nalanda inscription in India. According to the text, the king Devapaladeva of Bengala (Pala Empire) had granted 'Balaputra, the king of Suvarna-dvipa' (Sumatra) the revenues of 5 villages to a Buddhist monastery near Bodh Gaya. Balaputra was styled a descendant from the Shailendra dynasty and grandson of the king of Java.
From Sumatra, the Shailendras also maintained overseas relations with the Chola kingdom in Southern India, as shown by several south Indian inscriptions. An 11th-century inscription mentioned the grant of revenues to a local Buddhist sanctuary, built in 1005 by the king of the Srivijaya. In spite the relations were initially fairly cordial, hostilities had broken out in 1025.

Rajendra Chola I the Emperor of the Chola dynasty conquered some territories of the Shailendra Dynasty in the 11th century. The devastation caused by Chola invasion of Srivijaya in 1025, marked the end of Shailendra family as the ruling dynasty in Sumatra. The last king of Shailendra dynasty — the Maharaja Sangrama Vijayatunggavarman — was imprisoned and taken as hostage. Nevertheless, amity was re-established between the two states, before the end of the 11th century. In 1090 a new charter was granted to the old Buddhist sanctuary, it is the last known inscription with a reference to the Shailendras. With the absence of legitimate successor, Shailendra dynasty seems ceased to rule. Other family within Srivijaya mandala took over the throne

The Sailendras and indian buddhism The rise of the pāla dynasty in the 8th century ad brought paradigm shifts in Buddhist text, ritual, and sacred architecture that sent cultural waves across the expanding maritime and land trade routes of Asia.The architectural concepts travelled in the connected Buddhist world between the Ganges valley and Java. A movement of architectural ideas can be seen from studying the corpus of the temples in the Pāla (750–1214 AD) and Śailendra (775–1090 AD)domains of India and Indonesia. This led to a paradigm shift in the design of a *stūpa* architecture at Kesariya (Bihar) that emphasizes the arrangement of deities in the circular maṇḍalic fashion with a certain numerological configuration of life-size Buddha figures placed in the external niches of the monument. This new architectural concept possibly played a key role in the development of a more elaborate structure of Borobudur in Java.The architectural linkages emerge stronger

with the central fivefold structure of the temples of the Pālas and Śailendras. In order to make the essential comparison, a quick method of drawing architectural plans is developed that is based on the basic measurements and not archaeological plans.

Architectural development in *stūpa* structure: The main archaeological sites of the middle and lower Ganges plain were recorded in the 19th century by Alexander Cunningham, following the travel accounts of the Chinese scholar-pilgrims Faxian (c. 337–422) and Xuanzang (c. 602–64). Northeast India contained not only early Buddhist *stūpa*s and monastic complexes, but also a range of *stūpa* structures that advanced from the traditional hemispherical *stūpa* of Sanchi, through the cruciform, terraced *stūpa* structure of Nandangaṛh to the elaborate *stūpa-maṇḍala* of Kesariya. Most of the Pāla structures that may have served as a model for Central Javanese temples are in dilapidated state today, making it difficult to track the architectural borrowings.

But since 1998, the ASI excavations of some parts of Kesariya Stupa in Bihar,India have uncovered striking design similarities with the massive Central Javanese *stūpa* of Borobudur, whose stepped pyramid structure and maṇḍalic arrangement of deities in circular

This article demonstrates how the spread of Buddhism through maritime routes was closely linked with commercial activities, and how these networks were different from overland routes. It also provides a survey on early India–China networks and introduces the activities of Buddhist monks and the importance of Śrīvijayan rulers and their contribution to the maritime spread of Buddhism. In the second part, the article discusses the role of Sri Lanka and the Bay of Bengal networks in the maritime transmission of Buddhism. It shows that Buddhism spread in various forms from one cultural zone of Asia to another. It also demonstrates that the transmission of Buddhist doctrines, images and texts was a complex process that involved itinerant monks, traders and travellers.[1]
The Buddhas of Borobudur, for example, resemble in some ways the stone Buddhas of the Pāla Buddhist monastery of Ratnagiri in Odisha . There are unresolved debates about the origin of the Śailendra dynasty69 and their sudden rise to power in Central Java in c. 750–1090 that coincided with a massive surge in temple construction that included Borobudur (c. 760–830) and Candi Kalasan.

The construction dates of Buddhist monuments of the Śailendras and the Pālas are close and they have many design features in common. We have already seen how the design ideas for Buddhist art and architecture were circulating from the 5th century. It was the network of monks, artists, and craftsmen that made possible the construction of the huge monuments and ritual centres.

The first record of the association of the Śailendras and Pāla India is dated to the Kelurak inscription of c. 778 and the last inscription found in India referring to Śailendras is the smaller Leiden copperplate inscription of c. 1090.By then, the ties between the two states had been sustained for more than three centuries. [2]

From an architectural point of view, a monument like Borobudur can only have been the culmination of a long period of artistic gestation. Wolff Schoemaker (1924: 22) suggests three to four centuries of an autochthonous gestation period and argues about the lack of an autonomous development of sculpture in Java. Given the Śailendra-Pāla contacts and the construction of the earlier Śaiva temples on the Dieng plateau, it is not beyond the bounds of possibility in this connected Buddhist world that a breakthrough development in the Pāla domain, which transformed a *stūpa* into a *maṇḍala* of life-size Buddhas, was enhanced with narrative reliefs at Somapura and Vikramaśīla and reached its ultimate form of expression on Javanese soil. Jordaan has argued that the Śailendras built their monuments in direct cooperation with Indian architects and craftsmen. This seems possible at the high conceptual level of architectural design, but at the level of relief carving and highly innovative *stūpikā* design there is no trace of non-Javanese influences.[3]

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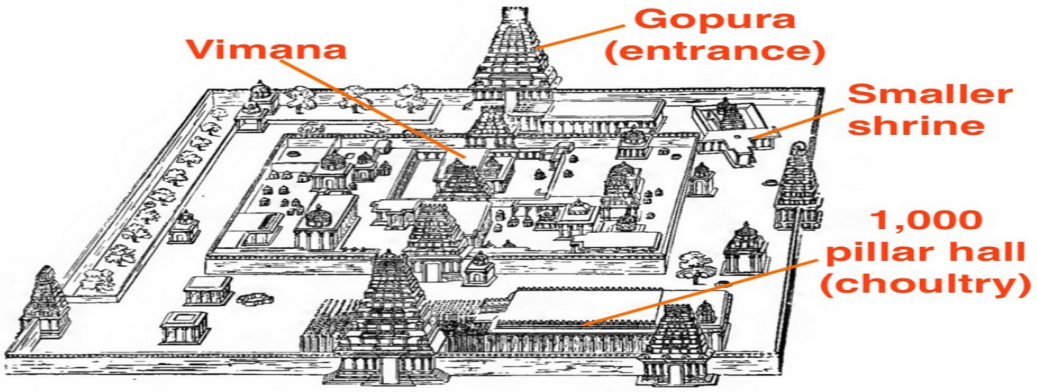


Temple at Tiruvallûr (from Râm Râz's Essay on the Architecture of the Hindus).

MANDALA

A mandala "circle" is a geometric configuration of symbols. In various spiritual traditions, mandalas may be employed for focusing attention of practitioners and adepts, as a spiritual guidance tool, for establishing a sacred space and as an aid to meditation and trance induction. In the Eastern religions of Hinduism, Buddhism, Jainism and Shintoism it is used as a map representing deities, or specially in the case of Shintoism, paradises, kami or actual shrines.

In New Age, the mandala is a diagram, chart or geometric pattern that represents the cosmos metaphysically or symbolically; a time-microcosm of the universe, but it originally meant to represent wholeness and a model for the organizational structure of life itself, a cosmic Religious meaning

In Hinduism, a basic mandala, also called a *yantra*, takes the form of a square with four gates containing a circle with a center point. Each gate is in the general shape of a T. Mandalas often have radial balance.

A *yantra* is similar to a mandala, usually smaller and using a more limited colour palette. It may be a two- or three-dimensional geometric composition used in *sadhanas*, puja or meditative rituals, and may incorporate a mantra into its design. It is considered to represent the abode of the deity. Each *yantra* is unique and calls the deity into the presence of the practitioner through the elaborate symbolic geometric designs. According to one scholar, "Yantras function as revelatory symbols of cosmic truths and as instructional charts of the spiritual aspect of human experience"

Many situate *yantras* as central focus points for Hindu tantric practice. *Yantras* are not representations, but are lived, experiential, nondual realities. As Khanna describes:
Despite its cosmic meanings a *yantra* is a reality lived. Because of the relationship that exists in the Tantras between the outer world (the macrocosm) and man's inner world (the microcosm), every symbol in a *yantra* is ambivalently resonant in inner–outer synthesis, and is associated with the subtle body and aspects of human consciousness.

The term 'mandala' appears in the Rigveda as the name of the sections of the work, and Vedic rituals use mandalas such as the Navagraha mandala to this day.
The science behind these constructions is that, the temple architecture gives cosmic force to the main idol in the Garbha Griha. Firstly, the Juathaskambam acts like an antenna and receives the cosmic force from the space and through a subversive channel it is linked to the main idol in the Garbha-graha. The cosmic force continuously flows through the Jathuskambam to the statue and energies it. Secondly, the celestial power fetched through the field gives the idol effulgence and

metaphysical powers. The cosmic-force is additionally maintained by noise waves (Vedic chants – Read about the Significance of Chanting) and the pyramid like tomb. The pyramid like construction helps to intensify and protect the cosmic force. These are the reasons for anybody to feel a positive energy, goodness, serenity or divinity when we approach the interior sanctum.
The copper plate has the propensity to suck part the Ether when that penetrates from the copper and the Herbal resulting in powerful atomic force that penetrates through the skin to heal the human, and that's why the copper plate is put on the temple tower.

The idol is washed with various materials (milk, sandal paste, oil) to preserve the idols. The idol is adorned with flowers and ornaments for mental and visual boost. But the diverse postures of the idol (sitting/standing, number of hands, weapons they hold) do have meaning in emitting the cosmic force.
Thus the temples serve up as the scientific room to receive the shower of cosmic force or God's blessing.
From my understanding Temple Gopurams are an important part of any Hindu temples and there are specific reasons for their existence. They are:
1) Temple Gopurams are built to receive the positive energy from the universe. Cosmic rays will be received by the Gopuram and it will be passed to the statue in the temple.
2) Gopuram will also receive the energy from thunder/lightning and pass it to the ground. So it acted as a layer of protection for the temple and the nearby areas.
3) Temple Gopuram were built largely to depict the culture and art of ancient people
4) It also used to act as a landmark in olden days to find out the cities, way to different places.
5) In olden days , kings built temples in order to give job to the people of the country and along with that future generations will come to know the architectural talents that ancient people had.
6) The small carvings and statues in temple gopuram depict the story of the god and also will show life lessons.

Site and plan of Borobudur

Borobudur covers a total surface area of around 2,500 m2. The monument is a marvel of design, decorated with 2,672 relief panels and originally 504 Buddha statues. The architecture and stonework of this temple have no equal. It was built without using any cement or mortar! The structure is like a set of massive interlocking Lego blocks held together without any glue. Built with about 2,000,000 cubic feet (56,600 cubic metres) of gray volcanic stone, **Borobudur** encloses a small hill and is **shaped** like a stepped pyramid with three major levels—a square base, a middle level of five square terraces, and an upper level of three circular terraces—totaling, in effect, nine lesser sections It was built in three tiers: a pyramidal base with five concentric square terraces, the trunk of a cone with three circular platforms and, at the top, a monumental stupa.

Architecture: From Darkness to Light: The idea of moving from the darkness into the light is the final element of the experience of Borobudur. The temple's pathway takes one from the earthly realm of desire (*kamadhatu*), represented and documented on the hidden narratives of the structure's earthbound base, through the world of forms (*rupadhatu*) as expounded on the narratives carved along the four galleries set at right angles, until one finally emerges into the realm of formlessness (*arupadhatu*) as symbolized and manifested in the open circular terraces crowned with 72 stupas.

However, the symbolization of enlightenment these stupas represent is not intended to be merely aesthetic. Buddhist stupas and mandalas are understood as "spiritual technologies" that harness spiritual "energies" in the creation of sacred space. The repetition of form and the circumabulatory progress of the pilgrim mimic, and thereby access, the cosmological as a microcosm. The clockwise movement around the cosmic center reproduces the macrocosmic path of the sun. Thus, when one emerges from the dark galleries representing the realms of desire and form into the light of the "formless" circular open air upper walkways, the material effect of light on one's physical form merges concomitantly with the spiritual enlightenment generated by the metaphysical journey of the sacred path.

Light, in all its paradoxes, is the ultimate goal. The crowning stupa of this sacred mountain is dedicated to the “Great Sun Buddha” Vairocana. The temple sits in cosmic proximity to the nearby volcano Mt. Merapi. During certain times of the year the path of the rising sun in the East seems to emerge out of the mountain to strike the temple’s peak in radiant synergy. Light illuminates the stone in a way that is intended to be more than beautiful. The brilliance of the site can be found in how the Borobudur mandala blends the metaphysical and physical, the symbolic and the material, the cosmological and the earthly within the structure of its physical setting and the framework of spiritual paradox.

Borobudur and the concept of path in Buddhism

Paths have been pervasive in human civilization. We are all familiar with the streets, trails, and lanes along which we routinely travel. Ancient Roman roads are utilized in some places even today. In contemporary computer culture we follow “paths” on webpages as we find our way to the information or experience we are searching for or find unexpectedly. There are simulated paths in complex first-person virtual reality video environments, where role-playing games formulate their content around the path to be conquered. The idea of path is an important concept in Buddhism, and is essential in understanding the meaning and purpose of one of the most remarkable and impressive monuments in the world: Borobudur.

Borobudur, Indonesia (photo: Claire André, CC BY-NC-ND 2.0)

Located on the island of Java in Indonesia, the rulers of the Śailendra Dynasty built the Temple of Borobudur around 800 C.E. as a monument to the Buddha (exact dates vary among scholars). The temple (or candi in Javanese, pronounced “chandi”) fell into disuse roughly one hundred years after its completion when, for still unknown reasons, the rulers of Java relocated the governing center to another part of the island. The British Lieutenant Governor on Java, Sir Thomas Stamford Raffles, only rediscovered the site in 1814 upon hearing reports from islanders of an incredible sanctuary deep within the island’s interior.

photo: Wilson Loo Kok Wee (CC BY-NC-ND 2.0)

Set high upon a hill vertically enhanced by its builders to achieve a greater elevation, Borobudur consists of a series of open-air passageways that radiate around a central axis mundi (cosmic axis). Devotees circumambulate clockwise along walkways that gradually ascend to its uppermost level. At Borobudur, geometry, geomancy, and theology all instruct adherents toward the ultimate goal of enlightenment. Meticulously carved relief sculptures mediate a physical and spiritual journey that guides pilgrims progressively toward higher states of consciousness.

The entire site contains 504 statues of the Buddha. 1460 stone reliefs on the walls and opposite balustrades decorate the first four galleries, with an additional 1212 decorative reliefs augmenting the path. The relief sculptures narrate the Buddha’s teachings (the Dharma), depict various events related to his past lives (Jataka tales), and illustrate didactic stories taken from important Buddhist scriptures (sutras). Interestingly, another 160 relief sculptures adorn the base of the monument, but are concealed behind stone buttresses that were added shortly

after the building’s construction in order to further support the structure’s weight. The hidden narrative reliefs were photographed when they were discovered in the late 19th century before the stones were put back to help ensure the temple’s stability.

Borobudur, photo: Gildardo Sánchez (CC BY-NC-SA 2.0)

Moving past the base and through the four galleries, the devotee emerges onto the three upper terraces, encountering 72 stupas each containing a three-dimensional sculpture of a seated Buddha within a stone latticework. At the temple’s apex sits the large central stupa, a symbol of the enlightened mind.

The archaeological excavation into Borobudur during reconstruction suggests that adherents of Hinduism or a pre-Indic faith had already begun to erect a large structure on Borobudur's hill before the site was appropriated by Buddhists. The foundations are unlike any Hindu or Buddhist shrine structures, and therefore, the initial structure is considered more indigenous Javanese than Hindu or Buddhist.

Design

Borobudur ground plan taking the form of a Mandala

The monument is both a shrine to the **Lord Buddha** and a place for Buddhist pilgrimage.The journey for pilgrims begins at the base of the monument and follows a path around the monument and ascends to the top through three levels symbolic of Buddhist cosmology: ***Kāmadhātu*** (the world of desire), ***Rupadhatu*** (the world of forms) and ***Arupadhatu*** (the world of formlessness).

Zone 1: Kamadhatu *(The phenomenal world, the world inhabited by common people)*

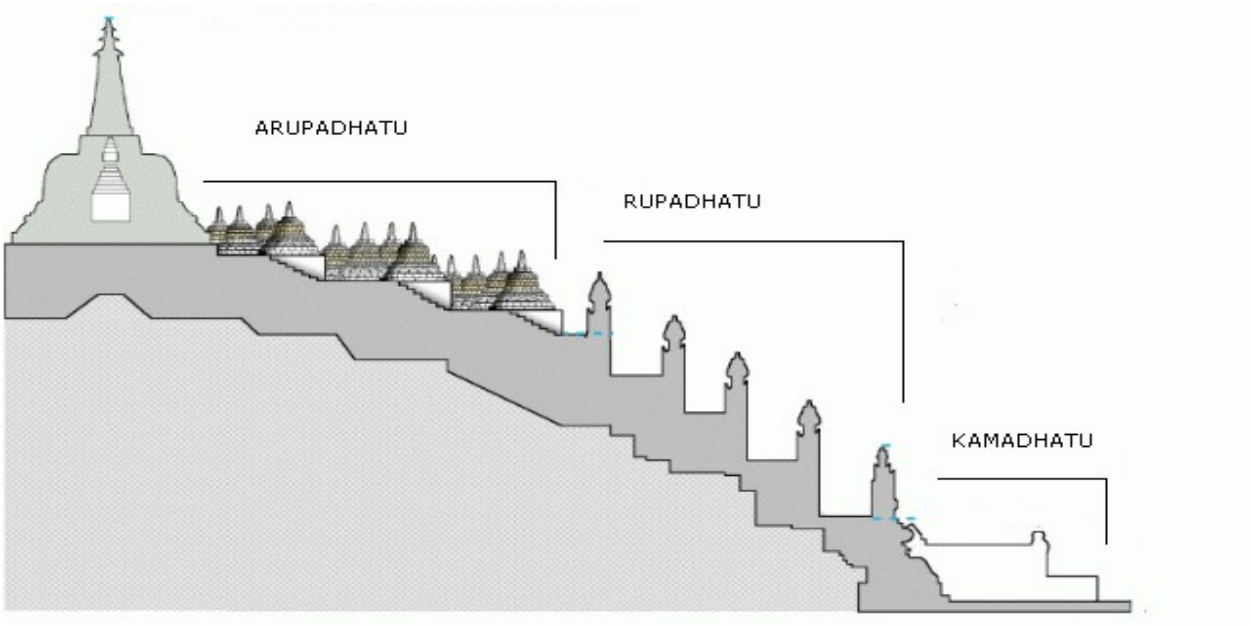
Borobudur's hidden **Kamadhatu** level consists of 160 reliefs depicting scenes of Karmawibhangga Sutra, the law of cause and effect. Illustrating the human behavior of desire, the reliefs depict robbing, killing, rape, torture and defamation. A corner of the covering base has been permanently removed to allow visitors to see the hidden foot, and some of the reliefs.

Zone 2: Rapudhatu *(The transitional sphere, humans are released from worldly matters)*

The four square levels of **Rapadhatu** contain galleries of carved stone reliefs, as well as a chain of niches containing statues of Buddha. In total there are 328 Buddha on these balustrade levels which also have a great deal of purely ornate reliefs. The Sanskrit manuscripts that are depicted on this level over 1300 reliefs are Gandhawyuha, Lalitawistara, Jataka and Awadana. They stretch for 2.5km. In addition there are 1212 decorative panels.

Zone 3: Arupadhatu (*The highest sphere, the abode of the gods)* The three circular terraces leading to a central dome or stupa represent the rising above the

world, and these terraces are a great deal less ornate, the purity of form is paramount.
The terraces contain circles of perforated stupas, an inverted bell shape, containing sculptures of Buddha, who face outward from the temple. There are 72 of these stupas in total. The impressive central stupa is currently not as high as the original version,
which rose 42m above ground level, the base is 9.9m in diameter. Unlike the stupas surrounding it, the central stupa is empty and conflicting reports suggest that the central void contained relics, and other reports suggest it has always been empty.
The monument guides pilgrims through an extensive system of stairways and corridors with 1,460 narrative relief panels on the walls and the balustrades. Borobudur has the largest and most complete ensemble of Buddhist reliefs in the world.
Borobudur is built as a single large stupa and, when viewed from above, takes the form of a giant tantric Buddhist *mandala*, simultaneously representing the Buddhist cosmology and the nature of mind. The original foundation is a square, approximately 118 metres (387 ft) on each side. It has nine platforms, of which the lower six are square and the upper three are circular. The upper platform features seventy-two small stupas surrounding one large central stupa. Each stupa is bell-shaped and pierced by numerous decorative openings. Statues of the Buddha sit inside the pierced enclosures.



The design of Borobudur took the form of a step pyramid. Previously, the prehistoric Austronesian megalithic culture in Indonesia had constructed several earth mounds and stone step pyramid structures called *punden berundak* as discovered in Pangguyangan site near Cisolokand in Cipari near Kuningan. The construction of stone pyramids is based on native beliefs that mountains and high places are the abode of ancestral spirits or hyangs. The *punden berundak* step pyramid is the basic design in Borobudur, believed to be the continuation of older megalithic tradition incorporated with Mahayana Buddhist ideas and symbolism.

As mentioned earlier the monument's three divisions symbolize the three "realms" of Buddhist cosmology, namely *Kamadhatu* (the world of desires), *Rupadhatu* (the world of forms), and finally *Arupadhatu* (the formless world). Ordinary sentient beings live out their lives on the lowest level, the realm of desire. Those who have burnt out all desire for continued existence leave the world of desire and live in the world on the level of form alone: they see forms but are not drawn to them. Finally, full Buddhas go beyond even form and experience reality at its purest, most fundamental level, the formless ocean of nirvana. The liberation from the cycle of Saṃsāra where the enlightened soul had no longer attached to worldly form corresponds to the concept of Śūnyatā, the complete voidness or the nonexistence of the self. *Kāmadhātu* is represented by the base, *Rupadhatu* by the five square platforms (the body), and *Arupadhatu* by the three circular platforms and the large topmost stupa. The architectural features between the three stages have metaphorical differences. For instance, square and detailed decorations in the *Rupadhatu* disappear into plain circular platforms in the *Arupadhatu* to represent how the world of forms—where men are still attached with forms and names—changes into the world of the formless.

Congregational worship in Borobudur is performed in a walking pilgrimage. Pilgrims are guided by the system of staircases and corridors ascending to the top platform. Each platform represents one stage of enlightenment. The path that guides pilgrims was designed to symbolize Buddhist cosmology.

In 1885, a hidden structure under the base was accidentally discovered. The "hidden footing" contains reliefs, 160 of which are narratives describing the real *Kāmadhātu*. The remaining reliefs are panels with short inscriptions that apparently provide instructions for the sculptors, illustrating the scenes to be carved. The real base is hidden by an encasement base, the purpose of which remains a mystery. It was first thought that the real base had to be covered to prevent a disastrous subsidence of the monument into the hill. There is another theory that the encasement base was added because the original hidden footing was incorrectly designed, according to *Vastu Shastra*, the Indian ancient book about architecture and town planning. Regardless of why it was commissioned, the encasement base was built with detailed and meticulous design and with aesthetic and religious consideration.

Building structure

Approximately 55,000 cubic metres (72,000 cu yd) of andesite stones were taken from neighbouring stone quarries to build the monument. The stone was cut to size, transported to the site and laid without mortar. Knobs, indentations and dovetails were used to form joints between stones. The roof of stupas, niches and arched gateways were constructed in corbelling method. Reliefs were created *in situ* after the building had been completed.

The monument is equipped with a good drainage system to cater to the area's high stormwater run-off. To prevent flooding, 100 spouts are installed at each corner, each with a unique carved gargoyle in the shape of a giant or makara.

Hilly Construction: Borobudur differs markedly from the general design of other structures built for this purpose. Instead of being built on a flat surface, Borobudur is built on a natural hill. However, construction technique is similar to other temples in Java. Without the inner spaces seen in other temples, and with a general design similar to the shape of pyramid, Borobudur was first thought more likely to have

served as a *stupa*, instead of a temple. A *stupa* is intended as a shrine for the Buddha. Sometimes stupas were built only as devotional symbols of Buddhism. A temple, on the other hand, is used as a house of worship. The meticulous complexity of the monument's design suggests that Borobudur is in fact a temple.
The basic unit of measurement used during construction was the *tala*, defined as the length of a human face from the forehead's hairline to the tip of the chin or the distance from the tip of the thumb to the tip of the middle finger when both fingers are stretched at their maximum distance. The unit is thus relative from one individual to the next, but the monument has exact measurements. A survey conducted in 1977 revealed frequent findings of a ratio of 4:6:9 around the monument. The architect had used the formula to lay out the precise dimensions of the fractal and self-similar geometry in Borobudur's design. This ratio is also found in the designs of Pawon and Mendut, nearby Buddhist temples. Archeologists have conjectured that the 4:6:9 ratio and the *tala* have calendrical, astronomical and cosmological significance, as is the case with the temple of Angkor Wat in Cambodia.The main structure can be divided into three components: base, body, and top. The base is 123 m × 123 m (404 ft × 404 ft) in size with 4 metres (13 ft) walls.] The body is composed of five square platforms, each of diminishing height. The first terrace is set back 7 metres (23 ft) from the edge of the base. Each subsequent terrace is set back 2 metres (6.6 ft), leaving a narrow corridor at each stage. The top consists of three circular platforms, with each stage supporting a row of perforated *stupas*, arranged in concentric circles. There is one main dome at the center, the top of which is the highest point of the monument, 35 metres (115 ft) above ground level. Stairways at the center of each of the four sides give access to the top, with a number of arched gates overlooked by 32 lion statues. The gates are adorned with Kala's head carved on top of each and Makaras projecting from each side. This Kala-Makara motif is commonly found on the gates of Javanese temples. The main entrance is on the eastern side, the location of the first narrative reliefs. Stairways on the slopes of the hill also link the monument to the low-lying plain.

Features-Outer enclosure
uring the visit, which began at 4 am, I was able to witness the spectacle of the sunrise from the temple, where the bluish light of dawn slowly unveils the mountains surrounding the temple, while a thick fog that emanates from the Javanese jungle makes you feel like being in a not earthly place, closer to heaven.

BOROBUDUR, THE ARCHITECTURAL MANDALA.


In Buddhism, the mandala represents a landscape of the universe with Buddha in its center, and shows the different steps in the process of finding the truth. Borobudur was built on a hill, following the layout of a giant mandala, representing the Buddhist cosmology. It consists of nine platforms divided into three sections:
- The upper three are circular platforms, called ***Arupadhatu***, and have a slightly curved oval shape consisting of two minor axes aligned with the cardinal points and two major axes aligned with the intermediate directions.
- The six lower platforms are square, called ***Rupadhatu***,
- Moreover, in 1885 a structure in the base was discovered and it was called ***Kamadhatu***.

The lower platform probably also had a structural function to prevent the collapse of the structure. It was added after the temple was finished, as it can be seen in one of the corners, where the older reliefs have been exposed.

The architectural layout leads the visitor throughout a system of stairs in order to ascend to the platforms and reach the top of the structure, a clear representation of

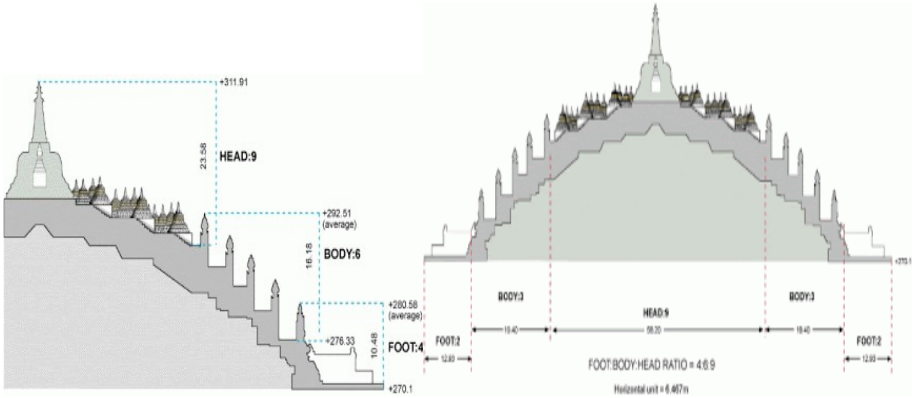
the journey towards a spiritual "enlightenment". The pilgrims walked each platform twice, in order to learn from the reliefs on each side.
Between the latest square platform and the first circular one there is an arch topped by an intimidating figure of a guardian. It is a reference to a transition to a more pure place, where evil spirits had no access.The bell-shaped stupas contain the figure of a Buddha. This is quite unusual, I have not seen it in other Asian countries, perhaps due to a syncretism between Buddhism and ancient Javanese traditions, where ancient ascetics used go to meditate in caves.


An interesting detail is that the openings of the stupas of the first two levels are in diamond shape, while those of the stupas of the upper platform are in square shape. (Note the different form of the pieces of stone). Perhaps this symbolized the path perfection, to the enlightenment that every pilgrim aspired by climbing and meditating through the different platforms.

The last great stupa, crowned by an octagonal pinnacle, has no opening and some people say that inside there used to be a golden Buddha, stolen by a Dutchman explorer, but this theory has not been proved. The simplicity of its form contrasts with the baroque richness of the reliefs that are located in the platforms below, and I imagine that has to do precisely with the austerity and simplicity that Buddha preached.

ASTROLOGICAL-COSMOLOGICAL-MATHEMATICAL RELATIONS IN BOROBUDUR

The structure can be divided into three main elements: the base, the central part and the top, which in analogy to the feet, body and head represent the three states of mental preparation: the Kamadhatu or world of desires,the Rupadhatu or world of forms and the Arupadhatu or formless world. A 1977 study by the professor found a ratio of 4:6:9 for the composition of both the three parts of the temple as well as each of the temple main parts. This ratio is equal to that found in the temples of Pawon and Mendut as well as the impressive complex of Angkor Wat in Cambodia.



Section of the temple according to Professor Atmadi.Image courtesy of Borobudur.t**v**

The researcher Mark Long, who has been studying the calendrical, astronomical and cosmological relations in Borobudur for several years, based on its own survey of the complex, proposed that the same ratio of 4:6:9 can be applied to the width of the whole monument.
North South Section, where according to Mark Long the same 4:6:9 ratio was used, such as in the height of the temple.
It is thought that the architect of Borobudur, named Gunadharma, believed that the plans of temples played a direct role in determining the fate of each occupant of the structure, so the architect's role should be to harmonize the forces of the microcosm that govern human life with the macrocosm that governs the life of the

gods. Gunadharma took the *tala* as a measurement unit, which is the distance between the thumb and little finger when they are stretched to their maximum separation, a system widely used in India. Because this measure varies little from person to person it is possible that the *tala* form an important person may have been employed as a method of standardization. Mark Long has found that the extent of the *tala* used in the monument was 22.9 cm.

Based on his own measurements, Long stated that the overall dimensions are based on a number of *talas* that symbolize important events in the Hindu calendar, specifically a calendar called Vatsu Purusha Mandala. In the faces and square corners of this diagram the solstices and equinoxes are represented. The arrangement of the stupas follows a well-studied geometric pattern, avoiding, for example, being placed in the main diagonals of the monument, where it was believed the important divine energies flow.

DECORATION:Borobudur aside of the symbolism in their mandalic architectural layout displays also many references to the life of Buddha, both in reliefs and statues.The reliefs have an educational role. The scenes represent the history of Buddha, his various incarnations and the path that the faithful should follow to reach Nirvana.

The Buddha statues, many of whom are maimed and some missing, are distributed differently in the square platforms than in the circular ones. In the five square platforms, called Rupadhatu, the Buddhas, numbering 432, are located in niches, placed in rows in art outer part of the balustrades. The number of Buddhas diminishes as platforms get higher. Thus, the first platform contains 104 niches, the second 104, the third 88, the fourth 72 and the fifth 64.

Details of Borobudur/ Extreme left pic Model top temple-Photo courtesy of Davey Sarge

The upper platforms or *Arupadhatu*, contain 72 small latticed stupas (which are mound-shaped structures, typical of early Buddhism) that surround a larger stupa more. Thus, in the first level there are 32 stupas, 24 in the second and 16 in the third level.

While at first glance the Buddhas seem to be the same. sitting lotus position, which is sitting on crossed legs. However, the different hand position represents various statesof meditation. http://architecturalmoleskine.blogspot.com/2010/02/borobudur-

MANDALA IS IT ?

Creation of a Mandala

Artists and monks can create mandalas in sculptural and architectural forms. They may also paint mandalas on a wall, cloth, or paper. For example, for ceremonies, monks often create mandalas in less permanent media, with colored powders or sands. They put a lot of effort into producing mandalas. Performing a series of rituals, they prepare the space and objects used to create a mandala. These rituals may take up to three days to complete. Then the makers create a mandala in their minds before they begin the physical creation of the mandala.

Construction of a Mandala

The construction of a mandala is a part of the ritual. It includes chanting *mantras* or words of power. The ritual serves for the empowerment of the mandala seen as an object of cosmic energy. When practitioners meditate with a mandala, they access the energy that the mandala embodies.

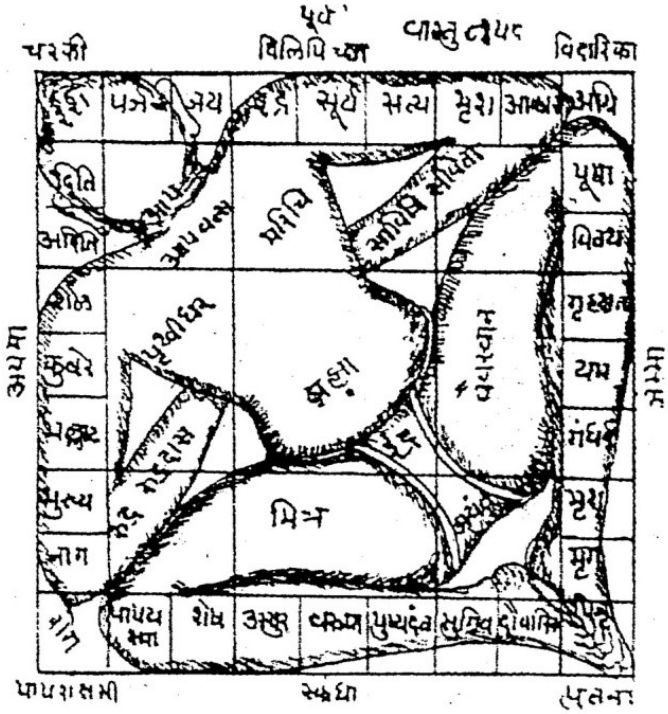
The actual construction of the mandala is the last phase of ritual preparation. First, monks snap the dry cord or wisdom thread. Next the deities and their consorts are invoked and dissolved into the string. The monks twist out the cord of five different colored threads that symbolize the wisdom-knowledge of each of the five Buddhas.

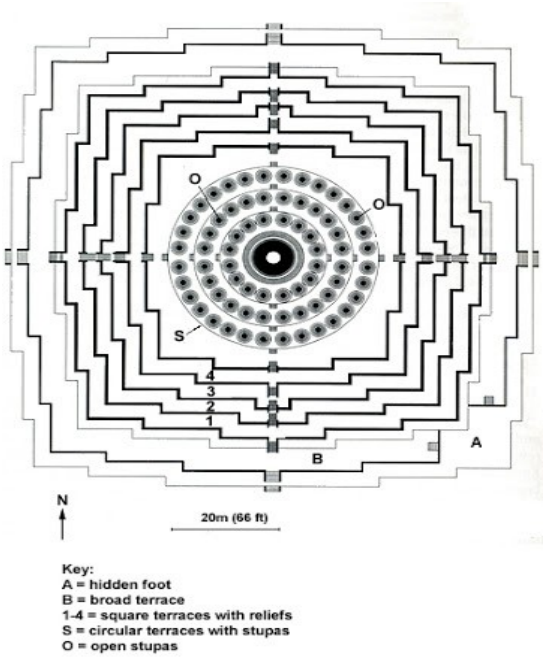
The Art of Mandala – Rituals

Today Buddhist lamas or priests draw Mandalas which are beautiful works of art. They also aid in the exploration of deep and divine concepts. Initiation rituals help to define the sacred space of a mandala. They come with a beautiful set of highly symbolic accessories. Before the mandala ritual takes place, practitioners use the tantric hand dagger to eliminate negative forces that may inhabit the space.

The *mandala* is a central entity in Hinduism and Buddhism and is the generic name for any plan or chart, which represents the cosmos (MICHEL, 1977). In Sanskrit *mandala* means 'circle and center' or 'Holy Circle' and points to its cyclic character. This circle is often embedded in a square, being a symbolic rendering of the surface of the earth (*Prithvi*). The earth is '*Caturbhsti'* or 'four cornered'.

The *Vaasta Purusha* mandala is a specific type of mandala used in Vaastu Shastra, representing a metaphysical plan of a building or temple in relation to the course of the heavenly bodies and supernatural forces. Purusha refers to the energy and power, which is generated by the understanding of this cosmic presence. The form is a square, subdivided in smaller squares. The number of subdivisions can vary and each type has a distinct name and is used in a specific context. The central area is called the *Brahma-sthana*, because Brahma or some other prominent deity concerned with the creation usually occupies it. The building (of a temple) takes place from a chosen grid, dedicated to a particular deity. Planetary divinities are arranged around the Bramasthana. The central place, being the most important part of the building, remains unbuilt.



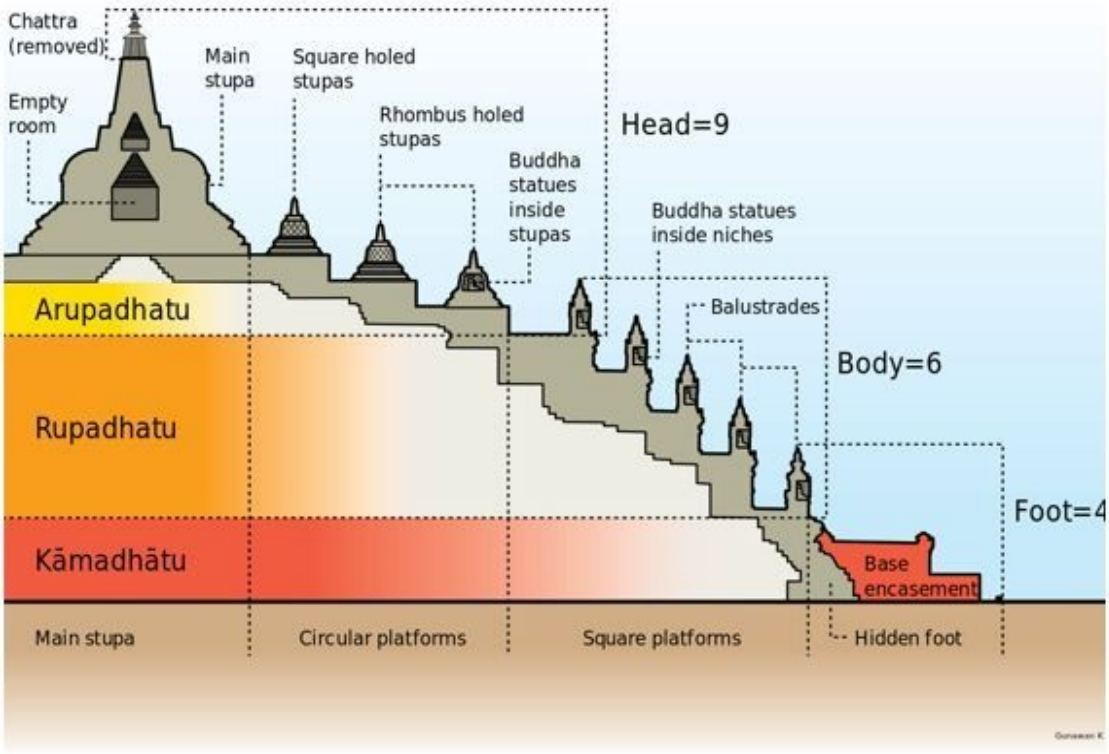


The cosmic man or *mahapurusha*, drawn on a temple *mandala* indicates the relation between parts of the body and the meaning of its position within the architectonic setting. The outlay of a temple is subject to the principle of *vimana*, meaning 'well-measured' or 'well-proportioned'. This picture is derived from an ancient manual of architecture. The main axis runs here from south-east to north west (head), but an orientation from south-west to north-east is also known.

The square and rectangular outlay: The '*Encyclopaedia of Indian Temple Architecture*' by Michael MEISTER (1988/1991) says that the Indian temple architecture, both in its northern and southern variety, are deeply inspired by a tetradic consciousness.

The square and rectangular outlay, if possible orientated along an east-west axis, with the entrance to the east, is the main characteristic. In front of the doorway is often a pillared hall, or *mandapa*. The attention to the four directions, either in the form of entrances or stairs, is prominent.

The layout of Borobudur is in fact a cosmological map of the Buddhist universe. Seen from above the shape of the pyramid is that of a traditional mandala whereby a square with four cardinal entry points gives way to a circular centre point. Moving from outside to inside one crosses three regions of Buddhist cosmology; *Kamadhatu* is the realm of desires, that of ordinary people; *Rupadhatu* is the realm of forms, where beings have controlled their earthly desires but are still bounded by physical form; *Arupadhatu* is the formless realm, of beings who have achieved sufficient merit to escape not just desires but even form and location.



Borobudur represents the Buddhist cosmos

As one climbs the temple of Borobudur one enters each of these realms. These first four levels around the temple represent the *Rupadhatu* realm, of beings who have controlled desire. Starting at the east facing entrance the carved stone reliefs depict mainly Jataka scenes, that is scenes from the Buddha's life, organised to instruct devotees as they proceed clockwise around each of the first four levels in turn.

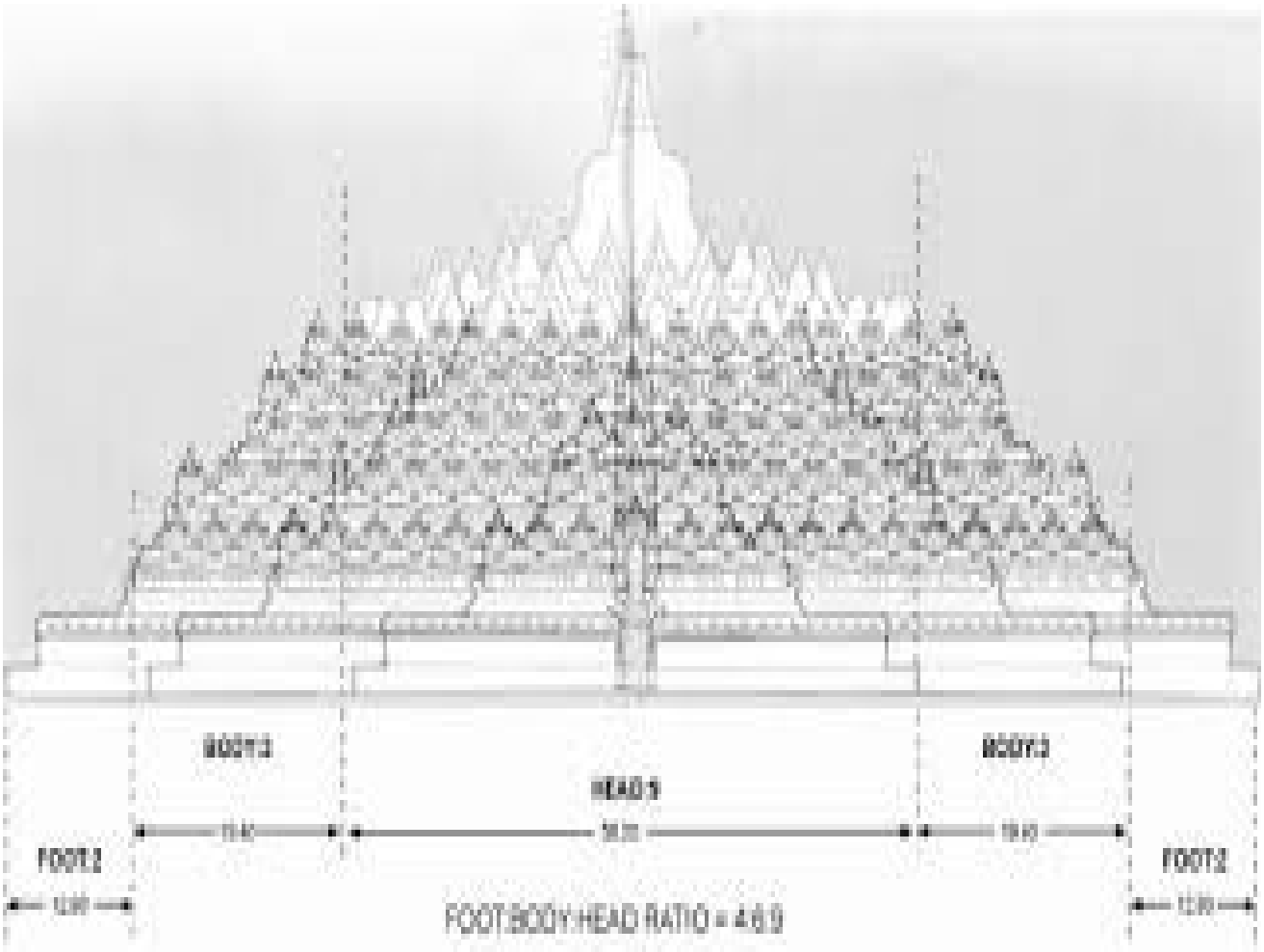
East facing Buddha statues in the *Calling the Earth to Witness* posture
One of the lower Rupadhatu galleries of Borobudur
On the four *Rupadhatu* levels there are also 432 Buddha statues located in niches along each side of the temple . On the east facing terraces these statues are all in the *Calling the Earth to Witness* posture. Moving round to the south the statues are in the *Alms Giving* posture and then to the west they are in the *Concentration & Meditation* posture. On the north facing levels they are in the posture of *Courage, fearlessness*. Around the fifth uppermost balustrade of the *Rupadhatu* levels the Buddha images facing in all directions are in the *Reasoning & Virtue* posture.

On reaching the fifth level one moves into the *Arupadhatu* formless realm of nirvana, represented by the shift to a circular layout. This realm is perhaps the most famous aspect of Borobudur due to its iconic perforated stupas. A total of 72 of these stupas are arranged on three circular terraces around the main central stupa. On the first two *Arupadhatu* levels the stupas have rhombic perforations whereas on the third and highest level the openings are square. In each of the 72 stupas there is a Buddha statue in the posture of *Turning the Wheel of Dharma*.

The upper *Arupadhatu* levels of Borobudur representing nirvana
The central stupa represents the centre of the Buddhist universe. It looks rather truncated because it is missing its original *chattra*, a three-tiered stone parasol that would have topped the stupa. There is known to be an empty room at the centre of the stupa which would be expected to contain the most highly revered images and relics. It is not known when or how these were lost.
Archaeologists have discovered traces of coloured pigments and gold leaf on the reliefs and believe that rather than the drab volcanic stone we see today Borobudur was once covered in white plaster, painted in vivid colours and covered in gold. It would have been a truly awe inspiring sight 1000 years ago.
The Hidden Foot

One of the mysteries of Borobudur concerns the lowest level of the temple representing the *Kamadhatu* realm of desires. On an initial climb of the temple the first level appears to start in the second level realm of *Rupadhatu* with tales of the Buddha's life. In fact the lowest *Kamadhatu* realm is represented by a gallery of carved reliefs which are hidden under an encasement and are hence known as the "hidden foot". This Hidden Foot was only re-discovered during European led restoration activities in 1885. It is not known exactly why this lower level has been covered up. Some postulate that the encasement had to be add


Aerial view of the concentric circulatory



Paharpur stupa on Left as a Mandala and Borobudur on right also in cross section

R E F E R E N C E S

Connections, ed. Dorothy C. Wong and Gustav Heldt (Amherst: Cambria Press, 2014)

Borobudur's Pāla forebear? A field note from Kesariya, Bihar, India,*swati chemburkar*

Across Space and Time: Architecture and the Politics of Modernity,By Patrick Haughey,google books

Though the assumption of the Borobudur as a *maṇḍala* seems possible, this view remains yet impossibleto prove. In spite of the previously mentioned similarities with the *maṇḍala*s, there are, however, alsomany differences. Beside the five transcendental Buddhas many other deities – both male and female – are often seen depicted in *maṇḍas* . However, neither of these deities can be found on the Borobudur.Instead we do find many other depicted Buddhas on the Borobudur, but these do not display any of thefeatures similar to other male or female deities. Thus, the other Buddhas do not function as a mere substitution for the various deities. Therefore, we may assume, that, as already had been

suggested, the Borobudur displays a variant of Buddhism in the way it manifested in Java at the time of the reign of Shailendra Dynesty but based on Indian influences and Mahāyāna Buddhism, which came to Java from China during the heydays of the Tang dynasty (618-906).The unique combination of these aspects would eventually become the Buddhism of Java.

Then there also was the Hindu dynasty of Sanjaya that ruled on Java during the same period of the Sailendra dynasty. Thefact that the Sanjaya shared their power with the Sailendra dynasty – for example, through donations for the construction of the Kalasan temple – illustrates, that, apart from its religious function, the Borobudur also formed an important expression of power.

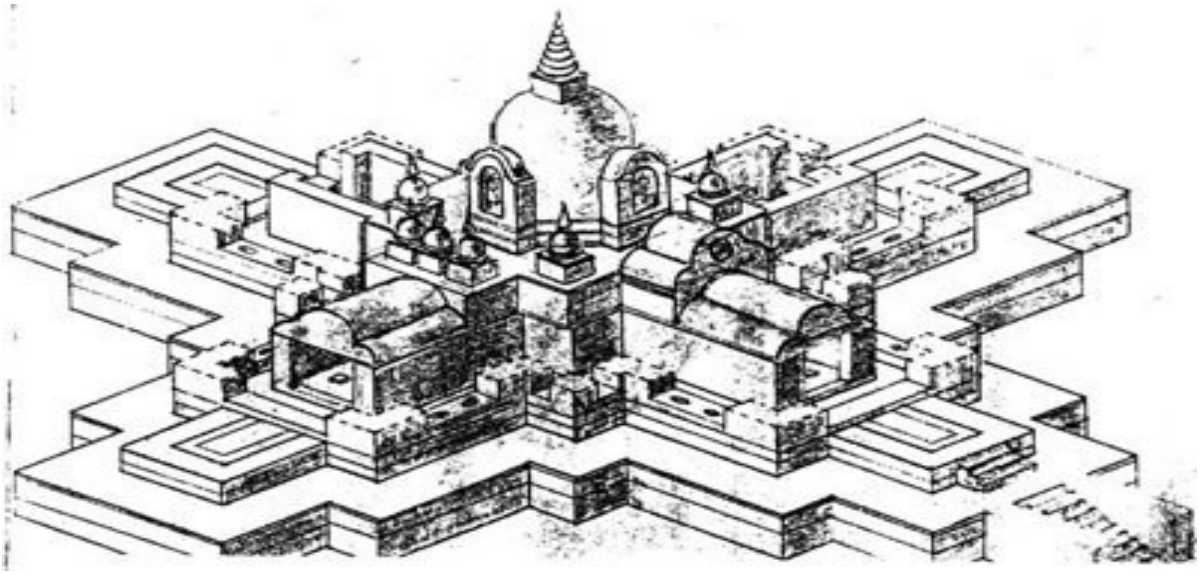
The origin of the mandala is not quite clear. However, the earliest concepts may have come from India and were initially mentioned in early Sanskrit texts. They described how the gods may have existed in their worlds. For example, Manjushri, the bodhisattva of wisdom, appears in this sculpture in his esoteric form, with three heads and six arms. The way he crosses his hands at the chest signifies supreme wisdom. Manjushri holds a bow and arrow, a sword, a lotus, and vajras or ritual weapons. Most prominent among the weapons is the sword, which cuts away ignorance.

Five stupas appear above the elaborate architectural setting. Within these stupas sit emanations of Manjushri. This sculpture represents a mandala because it conceptualizes the architectural plan of one of the great Buddhist monastic complexes or *mahavihara* of Bengal, probably in present-day Bangladesh.

Somapura Mahavihara

Somapura Mahavihara was one of the important centers of Buddhism. The complex is located in Paharpur, in northern Bangladesh. It was built by king Dharmapala (ca. 781–821) of the Pala dynasty (8th –12th centuries). The original tower in the center of the complex was believed to be about 32 meters (about 105 feet) high. Four large holes were placed around the tower towards the cardinal points.

Consequently, the cross-shaped plan of this *mahavihara* could represent a part of the mandala.



Philosophy Behind the Mandala

Five Tathagatas or Dhyani Buddhas

In places like Paharpur thinkers probably helped to develop the concept of the Five Tathagatas or Dhyani Buddhas. These deities are “self-born” celestial buddhas who have existed since the beginning of time. In contrast with historical figures like Gautama Buddha, they represent intangible forces and divine principles. These Buddhas usually include Vairocana, Akshobhya, Ratnasambhava, Amitabha, and Amoghasiddhi. Each of them has their own colors, symbols, and *mudras*. They also face different cardinal directions. As a result, monks found a new way to meditate on self-restraint.

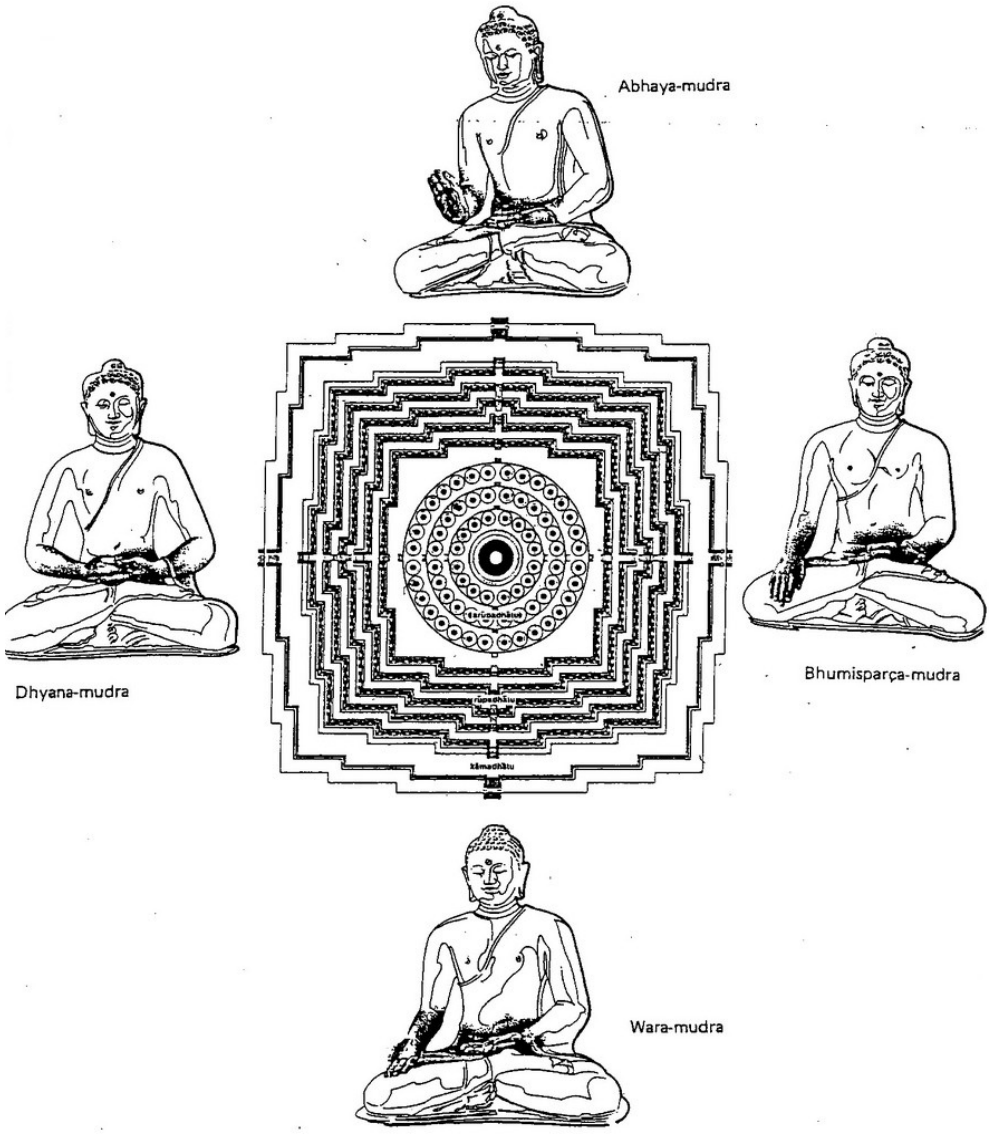
5 Dhyani-**Buddha**, in Mahayana Buddhism, and particularly in Vajrayana (Tantric) Buddhism, any of a group of five “self-born” celestial **buddhas** who have always existed from the beginning of time. The five are usually identified as Vairochana, Akshobhya, Ratnasambhava, Amitabha, and Amoghasiddhi.

As Takeo Kamiye puts it in *SOMAPURA MAHAVIHARA at PAHARPUR (BANGLADESH)*http://www.kamit.jp/17_world/28_paharpur/pah_eng.htm

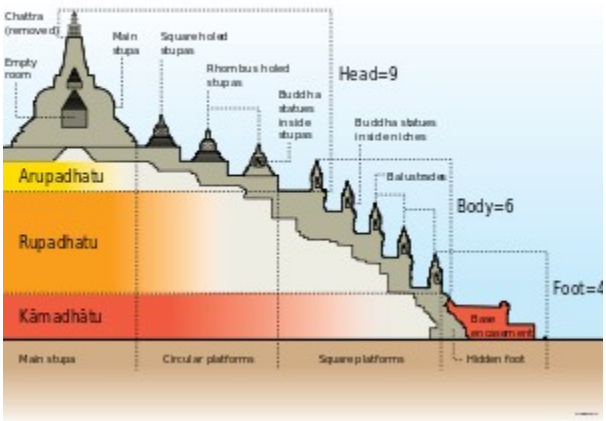
Here they were unified in the form of a great stupa surrounded by monk cells in a vast square shape. As a result, the temple form with a large geometric Mandala-type plan spreading to the four quarters, was established here and was then transmitted to Southeast Asia. It was furthermore scaled up from at the temples in Pagan, Myanmar, until the Borobudur, Indonesia, through the Angkor-Wat, Cambodia, under the influence of Paharpur. I have already written that this form was originated in Jaina temples, in Chapter 6 of “Jaina Architecture in India” on this website, “The Adinatha Temple at Ranakpur”.

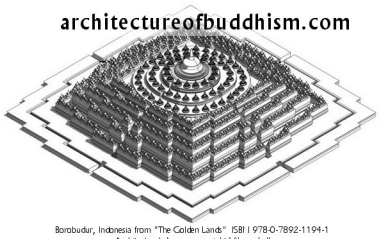
- Dharmachakra mudra. Dharmachakra in Sanskrit means the 'Wheel of Dharma'. ...

- Bhumisparsha mudra. Literally Bhumisparsha translates into 'touching the earth'. ...
- Varada mudra. This mudra symbolizes charity, compassion and boon-granting. ...
- Dhyana mudra. ...
- Abhaya Mudra.



Borobudur Cross Section and Building Ratio
Borobudur, Central Java, Indonesia





Borobudur, Indonesia from "The Golden Lands" ISBN 978-0-7892-1194-1
Architectural diagram copyright Vikram Lall

About the Author--- UDAY DOKRAS

The author has worked for 30 years in the human resources arena in India and abroad. He was Group Vice -President of MZI Group in New Delhi and has anchored Human Relations in Go Air and Hotel Holiday Inn;was General Manager-Health Human Resources at the Lata Mangeshkar Hospital amd Medical college. Is currently Consultant to Gorewada International Zoo,Nagpur and visiting Faculty at the Central Institute of Business Management and Research, Nagpur.

In Sweden he anchored HR in Stadbolaget RENIA, SSSB and advisor to a multi millionaire. He has studied in Nagpur, India where he obtained degrees of Bachelor of Science, Bachelor of Arts(Managerial Economics) and Bachelor of Laws. He has done his Graduate Studies in labour laws from Canada at the Queen's University, Kingston; a MBA from USA, and Doctorate from Stockholm University, Sweden. Apart from that he has done a Management Training Program in Singapore.
A scholar of the Swedish Institute, he has been an Edvard Cassel Fund and Wineroth Fund Awardee.A scholar for the Swedish Institute for 5 years.
In 1984 he was involved with the Comparative Labour Law Project of the University of
California, Los Angeles, U.S.A. He was also visiting lecturer there. In 1985 he was invited by the President of Seychelles to do a study of the efficacy of the labour laws of Seychelles.
Author of a book on a Swedish human resource law, his brief life sketch is part of the English study text book of 7 th Class Students in Sweden **-"Studying English. SPOTLIGHT 7**"- and 8th Class students in Iceland - **"SPOTLIGHT 8- Lausnir."**

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Dr. Uday Dokras

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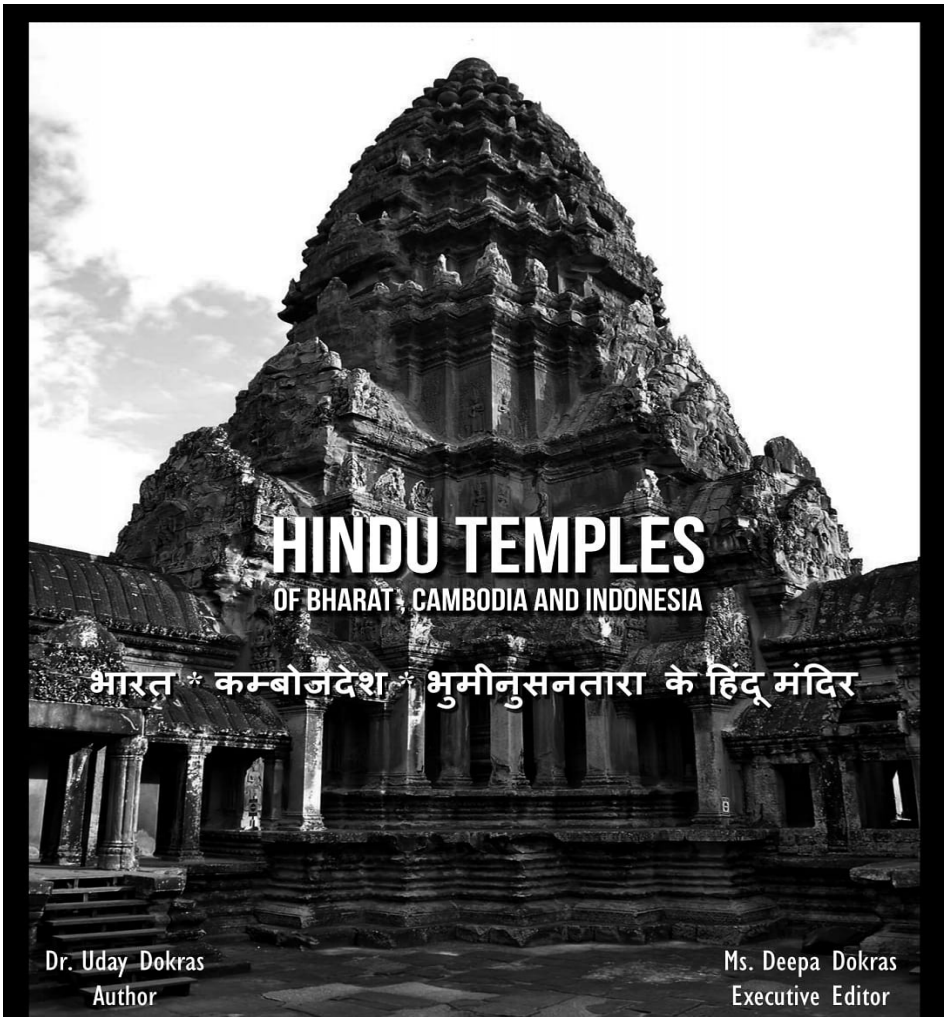
Ph.D. Stockholm University, Sweden,

Management and Efficacy Consultant, India



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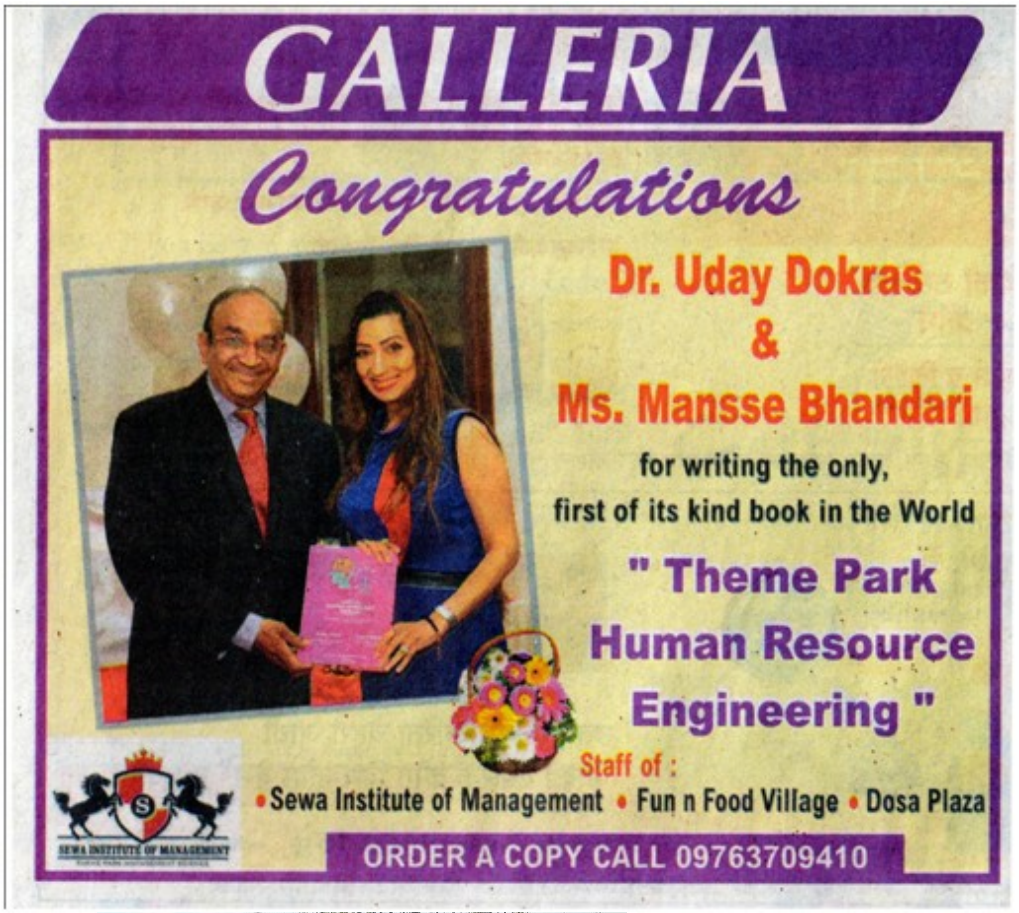

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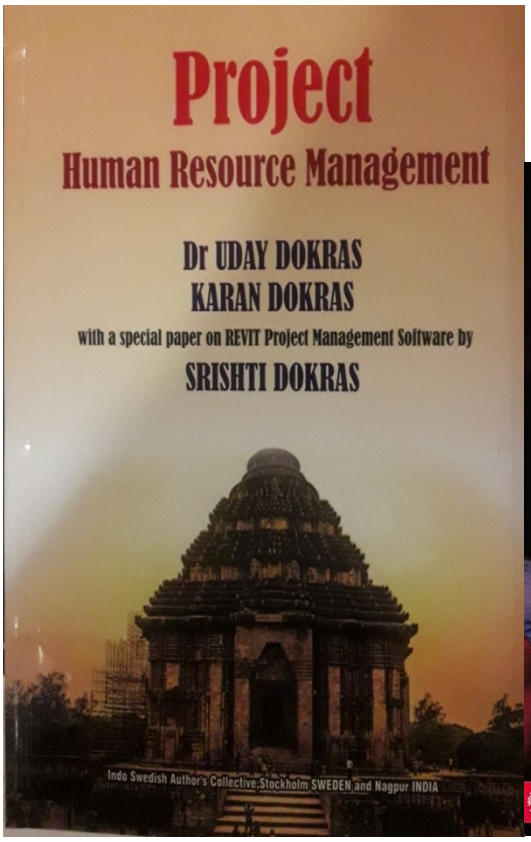
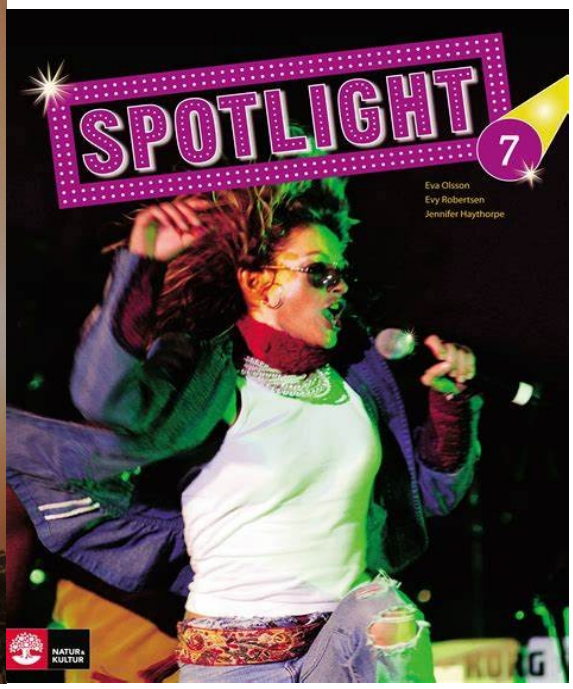




Iceland Sweden both countries use the English Text SPOTLIGHT-one of the lessons in which is about Dr Uday Dokras

Prof. S.Deshpande,President of the Indian Instituye of Architects, New Delhi INDIA releasing the book of Dr Dokras HINDU TEMPLES on the web in CARONA gimes(May 2010)

Book on 'Theme Park HR' launched

■ Staff Reporter

THE book 'Theme Park Human Resourse Engineering' written by authors Dr Uday Dokras and Mansse Bhandari recently.

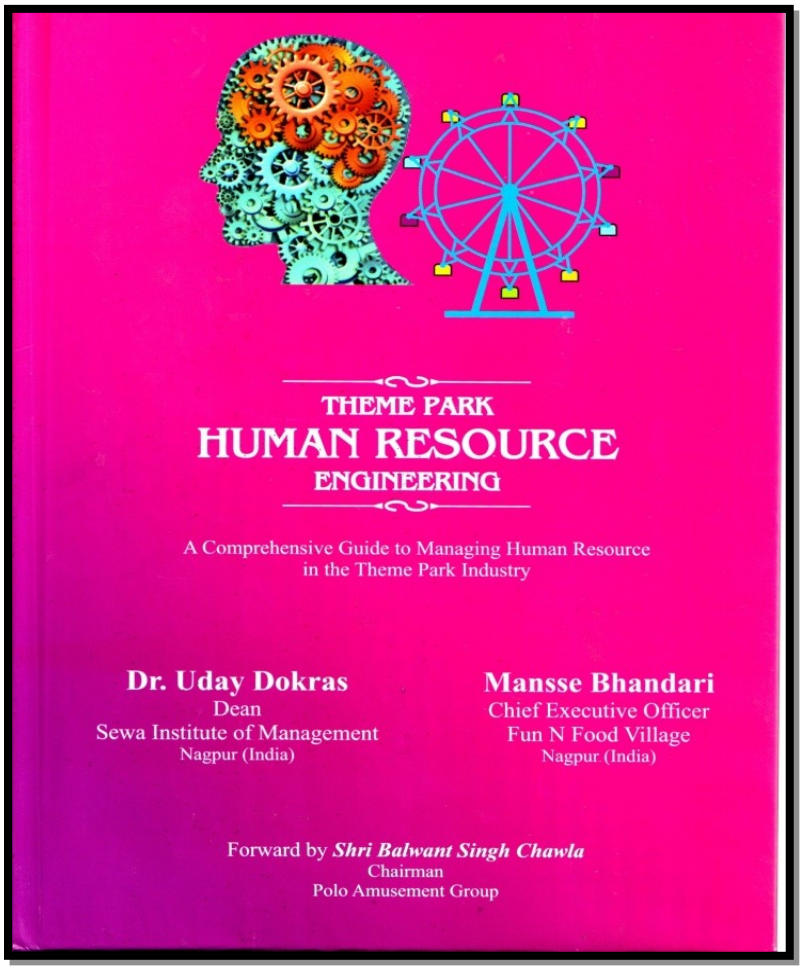
Speaking on the occasion Balwant Chawla, Chairman, The Polo Amusement Group, New Delhi And Tashkent, Uzbekisthan the chief guest, complemented the writers for choosing such an unique subject and writing this one of a kind book. First in the world on this subject.

This book is a comprehensive guide to manage employees working in all entertainment related businesses such as Malls, Theatres, Multi-plexes, amusement and Theme parks,Casinos,Malls,family entertainment centers etc.

In 11 chapters the authors deal with recruitment, training, discipline, bringing about efficiency and value add to the business using human resource interventions. This is the first book of its kind in the world and is the first time the subject has been tackled. The authors Mansse Bhandari and Dr Uday Dokras have been associated in the Human Resource field for 30 years. Ms. Bhandai is the CEO of Fun 'N' Food Village, Nagpur and was head of Human Resource at the Iceland Park in Dubai for 5 years. Dr Uday Dokras has written 2 other books on HR and was Head HR of GO Airlines in Mumbai. He has been the GM of Hotel Holiday Inn, Mumbai.

This book has been published by the Sewa Institute of Management, a new Institute that has taken up the challenge of introducing the Theme Park Management Science to the world.

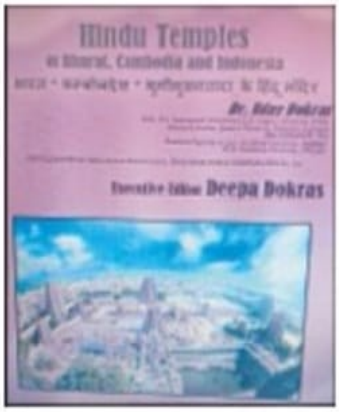
Dr Uday Dokras and Mansse Bhandari.



City author launches book on web from home

■ **Staff Reporter**

RENOWNED author Dr Uday Dokras, a prolific writer has penned a 450 page book on the Hindu Temples of Bharat and Cambodia. It is his eighth book and his co-author for this book is Deepa Dokras, a noted historian. He launched the book directly onto the worldwide web from home.



The book deals with how Hinduism reached the far East and the architecture of Hindu temples there and here in our country.

There is very little research done on this subject, claims Dr Uday and Deepa Dokras. Both described the technical aspects of building these temples as well as focuses in detail on temples of Nagpur and others in Cambodia and India.

Jageniapointed out. visiting www.hotelcloud.nic.in ly as possible.

Dr Uday Dokras pens a trilogy on Hinduism

This is 17th book by Dr Uday Dokras and 6th by his daughter

■ Staff Reporter

INDOLOGISTS and Hindulogists, Dr Uday Dokras and his daughter Srishti Dokras, an Architect have just released their trilogy on Hindu temples of South-East Asia and Indo China, titled 'Devraja' on the Net.

This is the 17th book by Dr Dokras and sixth by Srishti Dokras. Between the two, they have written 160 research papers on temple construction, Hindu religion in far away nations, design and management available for all to read on researchgate.net.

Spanning 1,200 pages in 3 volumes, the tales are centered on Devraja, the God King of many of these countries who embraced Hinduism and built some of the biggest and most majestic temple monuments in honour of God Vishnu far away in Cambodia and Indonesia.

Dr Uday Dokras and Srishti Dokras

"How many of us know that Garuda, the giant bird which is Lord Vishnu`s vehicle is the national symbol of Thailand, holds a *Trishul* in its hands and name of the national air carrier-is Garuda Airways or that the national flag of Cambodia depicts a Hindu temple on it - The Angkor Wat. Even fewer know that the Cham people of Vietnam are Brahmins or that the king of Thailand has Hindu priests performing all religious rituals in spite of being a Buddhist - as a national tradition," said Dr Dokras.

Devrajas or God King and Raja Dharma or Hinduism flourished in South-East Asian countries for more than 400 years and constructed the largest Hindu temples in the world. These 3 volumes trace the significance and history of these developments of how the Hindu religion spread to these countries, its expediency in making the Kings of these nations Devrajas, under Hinduism, in order to better lead their people, informed Dr Dokras.

The introduction to the book has been written by famous British Artist Kenny Perry, who is associated with Dr Uday Dokras' books and has contributed original digital art to adorn this picturesque trilogy full of more than 300 art works.

Prof Deshpande launches two books of Dr Dokras

PROF S A Deshpande, former Head of the Department of Architecture, Visvesvaraya National Institute of Technology and President of the Indian Institute of Architects, e-launched two books of Dr Uday Dokras.

Prof Deshpande appreciated Dr Dokras for writing three books in three months during lockdown. While e-launching the books, he said, "Time will always go by. What distinguishes us is how we use that time for our benefit."


(Left) Prof S A Deshpande and

The two new books by Dr Uday Dokras, who has done PhD from Sweden and is son of former Principal VRCE Vasant Dokras, are about 'Hinduism -- Celestial Mysteries of the Borobudur Temple' and 'Mysteries of the Holy Flower Lotus'. Dr Dokras was once consultant for Gorewada Zoo. Presently, he works for Kettle & Brew Beverages, Pune as online

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(Left) Prof S A Deshpande and Dr Uday Dokras releasing books.

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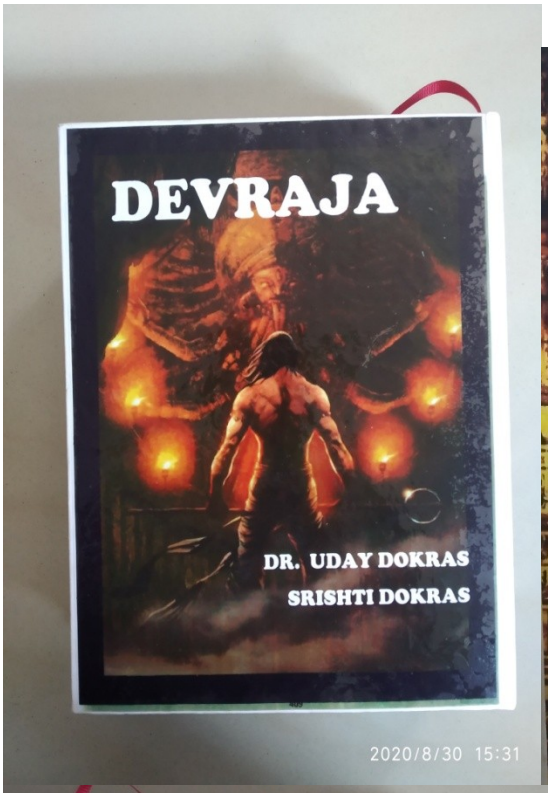
Some of my books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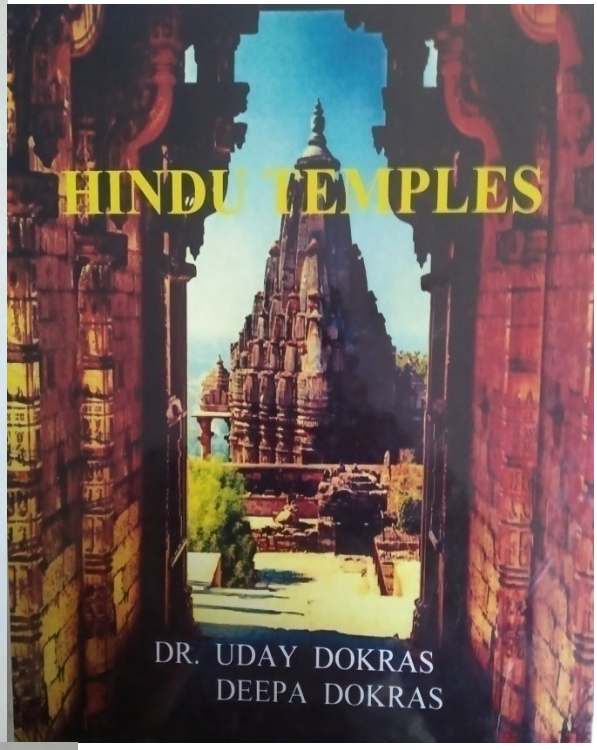
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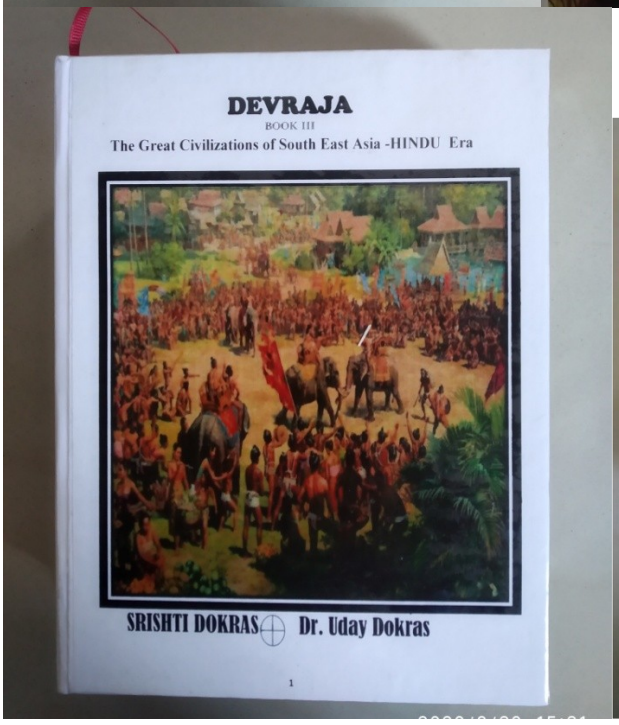
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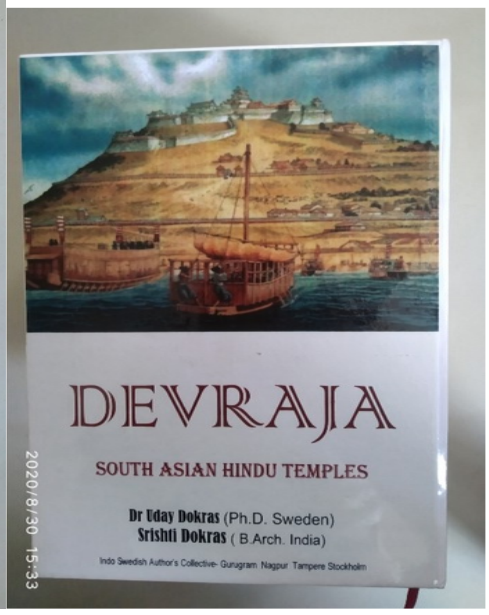
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Srishti Dokras (B.Arch. India)
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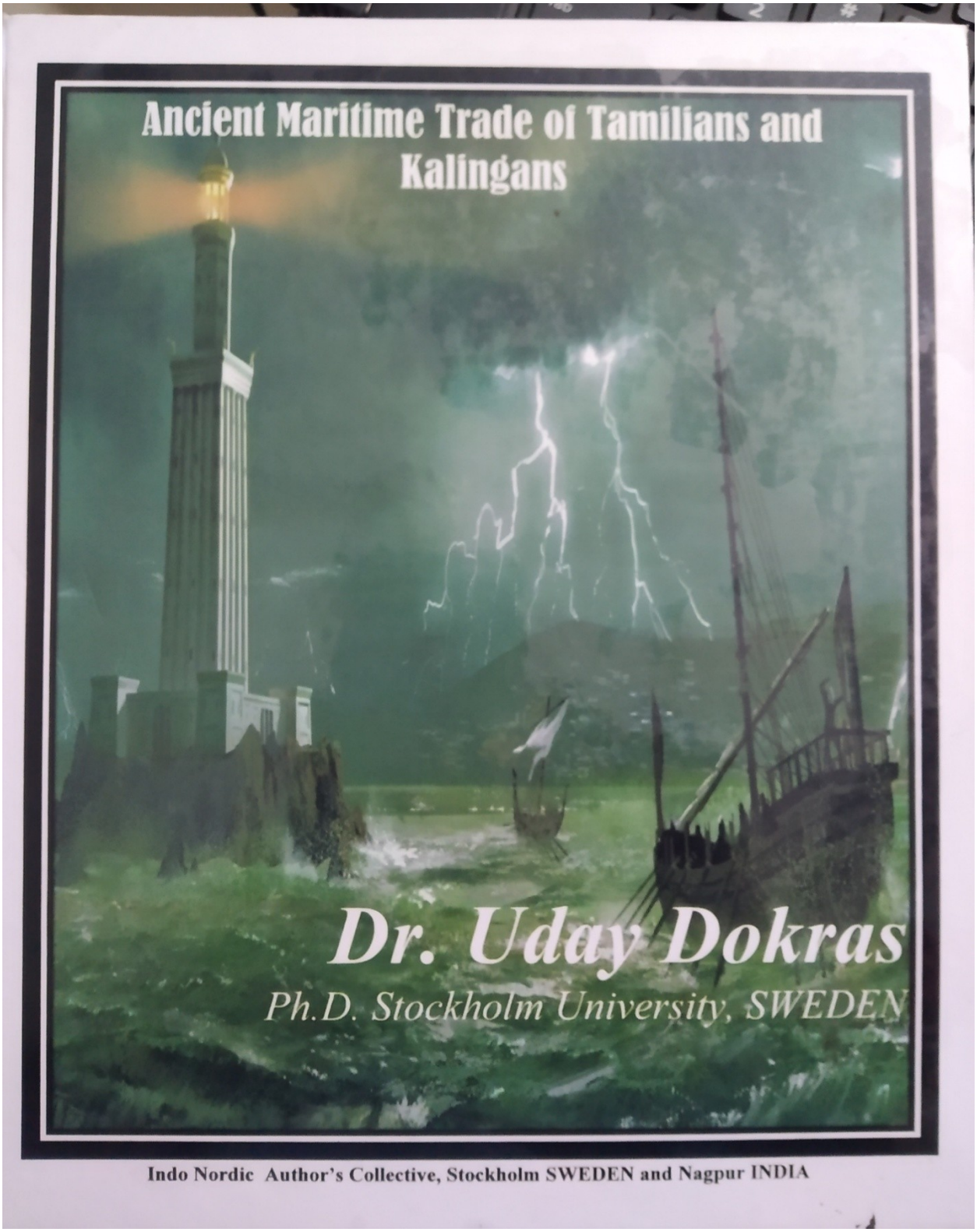
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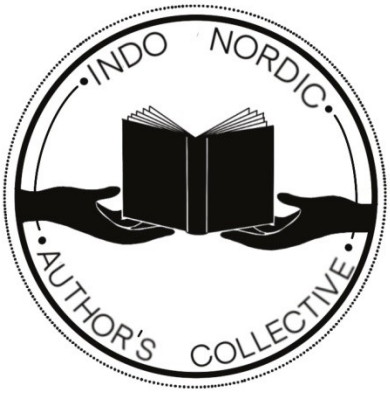
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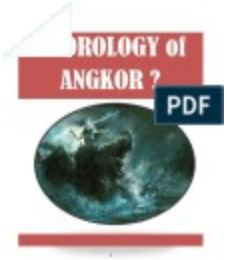

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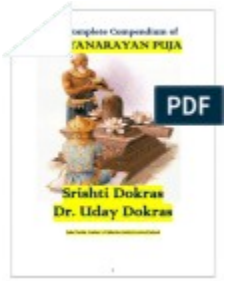
Vahanas- the vehicles of Hindu Gods. Animals in Hinduism. demi Gods



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Hindu Goddess MAHALAXMI Puja

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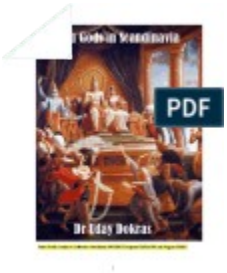

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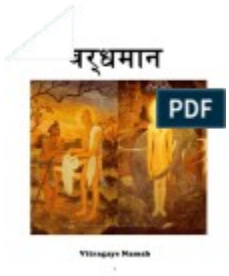

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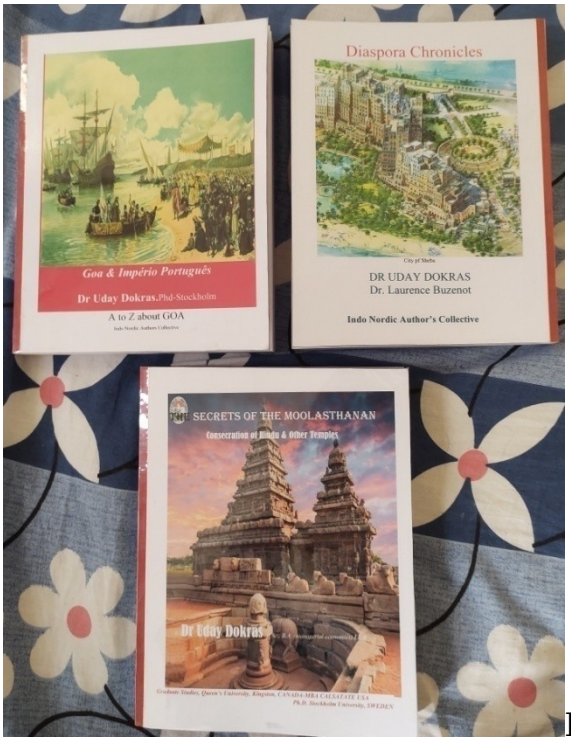


Later Bookks by the Authors

Nagpur's Prolific and Successful Writer

Dr. Uday Vasant Dokras, son of the later Principal of VNIT Dr. Vasant Dokras, has proved his mettle in writing; making history and India proud. He has written, 80 books since 1990 and 400 Technical and research papers/ articles. His books adorn many international Libraries such as Royal Swedish Library, European Union, Harvard University, StanfordUniversity amongst others-as well as the US Library of Congress, Washington DC.

Recently, he has co-authored a Trilogy on Palestine with Australian Islamic Studies Research author Muhsin Dadarkar who hails from Konkan but settled in Sydney since past 40 years. Muhsin has sold Dr Dokras books to 6 arab countries and will be translated in Arabic. Dr Uday's other books have been translated into Portugese(Brazil) and French. The French editions will be sold on Googlebooks(French).

His expertise on Hindu temples in Bharat and Cambodia is unmatched on which he has written 22 books and 180 papers. His work can be read on *academia.edu*. Dr Uday together with his daughter Srishti who lives in Seattle,USA heads and operate the Indo Nordic Author's Collective- which gives budding author's a chance to get published.

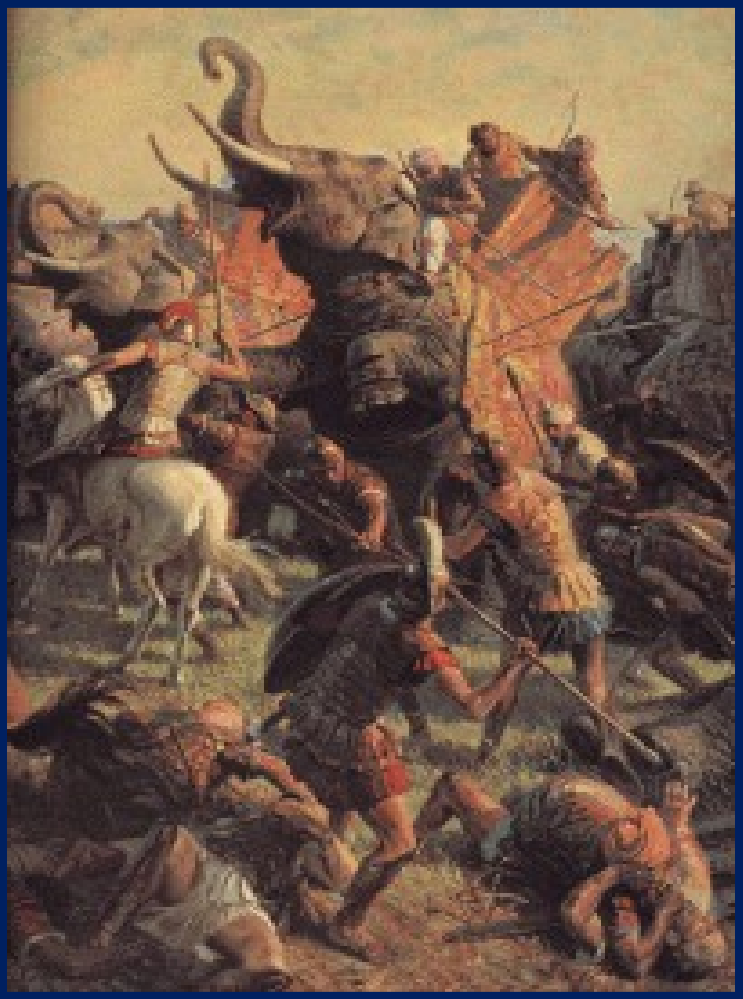
He co-authors with professors from Norway, USA, Reunion (France) and Museum Curators from USA . His brief life sketch is part of the English study text books of 7 th Class Students in Sweden -"Studying English. SPOTLIGHT 7"- and 8 th Class students in Iceland - "SPOTLIGHT 8- Lausnir."A first for an Indian.

To celebrate 5 lakh readers of his books (Half Million) , Shri Joginder Singh Uberoi our Chartered Accountant felicitated him at the Gondwana Club.

Shri Uberoi at left and Dr Dokras at Right

Half Million Readers to Dr Uday Dokras' books. GTechnical Papers and articles

Dr Uday DOKRAS-Srishti DOKRAS



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